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RUDIMENTARY AND PRACTICAL
Treatise on Music.

BY

CHARLES CHILD SPENCER.

TWO VOLS. IN ONE.

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A

RUDIMENTARY AND PRACTICAL

TREATISE ON MUSIC.

BY

CHARLES CHILD SPENCER,

AUTHOR OF A CONCISE EXPLANATION OF THE CHURCH MODES, ETC. ETC. ETC.

TWO VOLUMES IN ONE.

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PREFACE.

THE following pages are designed to assist the young student; and in them will be found not only the usual doctrine of music, but also some observations which, although they do not vary therefrom, yet are put in a somewhat different point of view. This regards especially the usual teaching concerning the minor scale, as to which form thereof is to be assumed as the normal or model. Some contend for one, and others for another form; while some authors again contend for two or three forms. The author of this little treatise thinks that it will be found, on analyzing the music of the best masters, that there are at least nine forms of the so-called minor scale. This will appear more manifest, if the analysis be made with respect to the harmonies *as well as* the melodies, or subjects harmonized. For every musician knows that a scale cannot be properly represented in its complete form by the melody alone, but the scale is complete, and that too very decidedly, by the harmony accompaniment given to it.

Those forms of the normal minor scale, which appear to have the dominant for their initial (or as we term it their "key") note, are genuine scales of the olden times, in which there is abundance of harmonized and unharmonized music written. Of course the chief part of it belongs to the ancient church ritual music; but nevertheless, there is music for the organ, such as fugues, &c., in these fine solemn old gamuts, by various masters, at least up to the time of Bach and Handel, both of whom wrote music (choruses, organ-pieces, &c.) in the fifth, sixth, and seventh forms, as given in this work. Witness Handel's Chorus, "And with His stripes," and Bach's Preludes to the German Choräle. Moreover, it is thought right to point out how all the extreme discords are produced from the degrees of the various forms of the minor scale ; for it is remarkable that the major scale does not produce them.

The author does not presume that his theory is correct, or that it will be acceptable to those whose opinions on the minor scale are already fixed ; yet he hopes that musicians will be disposed to examine the subject, and he will deem his labours amply rewarded, if they shall call forth some better notions by abler writers.

The examples on composition in the free style are purposely selected ; and the lighter kind of music, such as airs, varied or not, and all piano-forte music, as well as that for any particular instrument, has been avoided. For, whoever can compose music in the style herein exhibited, will never be at a loss for music of the more operatic, or ball-room kind. To say nothing of the necessity of knowing the functions of orchestral instruments, it scarcely ever happens that a student can write on a grand scale, without the study of books written expressly for particular objects.

In this work, the pupil is merely shown some of the materials for musical composition, and it is hoped that the examples in the various species of counterpoint will show him how vast the resources of this noble science are, as well as point out how easy it is to write a piece of music which shall be more or less entertaining and instructive, with very small means. For with a very simple subject we may, with care, make very agreeable music, by the variety of ways only in which it can be harmonized.

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RUDIMENTS OF MUSIC.

DIVISION I.

RUDIMENTAL THEORY OF MUSICAL SOUNDS.

CHAP. I.

WAVES OF CONDENSATION AND RAREFACTION—RATIOS OF THE LENGTHS OF WAVES, &c.

1. There are various light substances whose small parts. although in contact with each other, can be forced closer together, and amongst these is numbered the air.

2. It is well known that any quantity of air, in its ordinary state, can be forced into a smaller space, and while it is in this state of compression, it is said to be condensed.

3. When the air is condensed, and the power by which it has been forced into a smaller space is withdrawn, it will, by its elasticity, separate its own particles, and relieve itself, as it were, from the compression, and occupy its original space. This separation of the particles is called Rarefaction.

4. Thus we speak of the air as being condensed when it is in a state of compression, or its particles are in closer contact, and the closer they are together the greater is the condensation.

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5. And when, on the contrary, the particles are separated more or less from each other, and the pressure of each upon the other is less, we say the air is in a state of rarefaction, and the rarefaction is the greater the more the particles are separated, or which is the same thing, the less they mutually press upon each other.

6. If we suppose a quantity of air to be contained within a pipe, (an organ pipe for example) and all its particles set in motion, whether by a solid piston forced into one end of the pipe, or by a blast of wind forced into it by means of a bellows, the motion will be communicated from particle to particle, both within and beyond the length of the pipe; for that portion of air which is forced out of the pipe will compress the surrounding particles of air, and communicate its motion to them.

7. The motion thus communicated to the surrounding atmosphere will spread in all directions until the force of compression is destroyed by the accumulated resistance of the particles set in motion, at which instant the greatest condensation will take place, and the particles, by their elasticity, will immediately return to their original position.

8. There will be, therefore, an alternate motion of the air, forward and backward, so long as the force of condensation is continued, and when each particle has proceeded to its greatest distance in one direction, or rather when all the particles have been set in motion in one and the same direction, (say from left to right,) it is called a *wave*, so that there is always one wave caused by the condensing force and one by the elastic force. That is to say, there is one wave of condensation forward, and one of rarefaction back again.

9. Waves, such as are here spoken of, are of various lengths, according to the force applied and the number of particles set in motion. If these waves are caused by the action of sonorous bodies, such as organ pipes, &c. &c., the sound produced thereby is called a musical sound, so long as the waves are produced in equal portions of time.

10. Since the motion is not communicated to every particle

at the very same instant, but runs, as it were, along the whole wave, it is evident that a longer wave requires more time than a shorter one, or there will be more short waves than long ones in any portion (say one second) of time.

11. It is known by experiment that the longer waves produce the lower, or deeper sounds, and, *vice versa*, the higher, or shriller sounds are produced by the shorter waves. Whether the sound is produced by a wave caused by the action of the column of air set in motion within a pipe, or by the motion of a vibrating string (say of a pianoforte), the number of waves producing any one sound, in any given time (say one second), is the same.

12. It may now be perceived that whether we speak of waves of the air, or vibrations of elastic bodies (pianoforte strings, for example) as producing musical sounds, the number of waves is the same as that of the vibrations, and the length of a wave will be in proportion to the length of the string which produces the same sound.

13. It is evident that two bodies of *unequal* weight, set in motion by *equal* forces, will not move with equal velocities; for the heavier body will move slower than the lighter one. Thus two strings, cut from the same hank of pianforte wire (and, therefore, of the same thickness and density), put in motion by the same force (struck at the same instant with the same hammer), the longest string, being the heaviest, will move slowest, and, consequently, make the least number of vibrations; while the shortest will move quickest, and make the greatest number thereof, in the same time. It is just the same with two unequal columns of air set in motion by means of pipes of unequal lengths.

In the case of organ pipes the force is uniform, it being caused by the equal pressure of the wind in the wind chest. In that of pianoforte strings, the force is supplied by the momentum of hammers of equal weights, and is also uniform.

14. We see, therefore, from what has preceded, that musical sounds are caused by the equal vibrations of elastic bodies. The

extent of the vibrations need not be equal, but they must be performed in equal times.

15. The greater the extent of a vibration, the greater is the intensity of the sound; and the contrary. But the greater extent does not cause the sound to be heard at a greater distance; it is only so much the louder.

16. Nor does sound travel quicker in consequence of a greater extent of vibration or wave; for two sounds, however different the intensity of the vibrations which produce them may be, are heard at the same distance, at the same instant, although they strike our sense of hearing with unequal forces.

17. If the weaker of two sounds has not been heard by the listener, it is not because it has not travelled so far as the stronger sound has, but because the hearing power has been overcome by the force of the louder sound. This is easily proved by the weaker sound being continued after the stronger has ceased, when it will be distinctly heard.

18. If we take a hank of pianoforte wire, we may take it for granted that it is of the same thickness throughout its whole length, and, moreover, that any two equal lengths will be equal in weight—i. e. we may suppose any number of strings, cut from one and the same hank, to be of uniform thickness and density.

19. If, therefore, we take two strings, *unequal* in length, and stretch them with *equal* weights, and simultaneously cause them to vibrate, the number of vibrations of the longest will be less than that of the shortest (in any given time) in the proportion of the shortest to the longest string. For example, if the longer string be twice the length of the shorter, it will vibrate half the number of times in one second; or, which is the same thing, the shorter string will vibrate twice while the longer vibrates once, and similarly for any other proportionate lengths.

20. Moreover, the number of vibrations of a musical string producing any sound, is exactly the same as the number of atmospheric waves producing the same sound.

21. Sound may be propagated through various mediums—

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wood, water, &c.; but the most usual and natural medium is the air, since this it is which conveys all sounds to our organs of hearing.

22. A sonorous body (whether of wood, metal, glass, silk, cat-gut, or any other material) being put in rapid motion, communicates its motion to the air in which it moves, and causes it to wave to and fro, as frequently as the sonorous body vibrates.

23. It is found by experiment that sound travels at the rate of about 1120 feet per second, and is louder or softer according to the greater or lesser density of the atmosphere.

24. Whether sound be considered as produced by the vibrations of the elastic body or by the waving of the air, if it be a *musical sound*, the vibrations, or waves, must be performed in equal times, whatever their extent may be.

25. There must be at least thirty-two vibrations, or waves in one second of time, to produce a sound which can at all be considered as musical.

26. The sound produced by these thirty-two single waves, or vibrations, is the lowest sound in music, and it is denoted by musicians by the letter C, or the syllable Do.

27. Since sound is propagated through the air at the rate of 1120 feet per second, and there must be thirty-two single waves per second in order to produce the lowest sound appreciable as musical, we can find the length of the atmospheric wave by dividing 1120 by thirty-two, which gives thirty-five feet, and which is the length of some organ pipes producing this sound.

28. It is well known, from experiment and mathematical demonstration, that a wave of half the length of that which produces the lowest sound, produces a sound which is called the octave to the lowest; and that a wave of one-fourth its length produces another sound which is two octaves higher than the lowest sound. Similarly, a wave of one-eighth the length produces a sound three octaves higher; and so on to the ninth octave C, which is about the limit of the range of musical sounds.

29. Since the length of the wave which produces the octave sound is one-half the length of the lower sound, there must be twice as many waves per second in the octave sound as there are in the lower, four times as many in the second octave sound, eight times as many in the third octave sound, and so on to the ninth octave note, in which the number is 16384 single waves —i. e. 8192 waves *forward*, and the *same number back again.*

30. It is customary, in calculating the ratios of the vibrating of musical strings (and which answer to the waves of the atmosphere) to reckon by double vibrations, so that, instead of saying there are thirty-two (single) vibrations in the lowest sound C, writers on this branch of music say there are sixteen (double) vibrations in this sound. This method of calculation, therefore, gives 256 vibrations for the fourth octave C.

31. The well-known sounds produced by a "peal of *eight* bells," are the same which musicians denominate their major diatonic scale. It does not signify on what sound the scale commences, the order of succession is always the same.

32. For the sake of simplicity, we can represent the eight sounds by the syllables Do, Re, Mi, Fa, Sol, La, Si, Do. Do being the lowest, Re the next to it, Mi the next to this, and so on, to the highest of the eight. These may be put in order thus :—

1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,
Do;	Re;	Mi;	Fa;	Sol;	La;	Si;	Do;

and this order will serve for the "major diatonic scale," whatever note it may proceed from.

33. Experiments prove that—

for every	8	vibrations of the 1st sound Do,	there are	9 of Re, the 2nd;
,,	4	,,	,,	5 of Mi, the 3rd;
,,	3	,,	,,	4 of Fa, the 4th;
,,	2	,,	,,	3 of Sol, the 5th;
,,	3	,,	,,	5 of La, the 6th;
,,	8	,,	,,	15 of Si, the 7th;
,,	1	,,	,,	2 of Do, the 8th.

34. We are able from the above table to find the number of vibrations per second in each sound of the so-called major diatonic scale. Let us take the fourth octave sound, C, whose number of double vibrations is 256 for the first sound of the series, we shall find from the above proportions the numbers for the whole series to be as follows :—

1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,
Do,	Re,	Mi,	Fa,	Sol,	La,	Si,	Do,
256;	288;	320;	340;	384;	420;	480;	512.

Multiplying each of these by two, produces a scale an octave higher; dividing them by two, produces one an octave lower; which may be repeated to the limits of musical sounds, and we shall obtain nine series in all. The one above represented being the fifth or middle octave series.

35. As the number of waves, or vibrations, in one second increases, so the length of each wave must diminish. For if the length be 35 feet when there are thirty-two single waves per second, the length will be 17 feet 6 inches, when there are sixty-four in one second; for 1120 divided by sixty-four is seventeen and a half.

36. Now since there are nine waves, or vibrations, of the sound which we call Re to every eight of the sound called Do, the length of each wave of the sound Re is eight-ninths of the length of that of the sound Do. This gives 31 feet 1 inch (very nearly) for the length of the second sound of the lowest series, or diatonic scale. Similarly, the length of the wave in the third sound, Mi, is 28 feet; that of the wave in the fourth sound, Fa, is 26 feet 3 inches; so 23 feet 4 inches is the length of the wave in the fifth sound, Sol; 21 feet is that of the wave in the sixth sound, La; 18 feet 8 inches is the length of the wave in the seventh sound, Si; 17 feet 6 inches is the length thereof in the octave sound Do, as before stated.

37. From this we easily obtain the lengths of the waves in each succeeding series, by dividing the above lengths by two, until, by continual division we arrive at the "middle

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octave series," or diatonic scale, from C to C in (31), when we shall find the length of the wave producing the first note, Do, is 2 feet 2 inches (very nearly), which is the length of the pipe producing middle C, in the organ stop called the "Dulciana."

CHAP. II.

RATIOS OF MUSICAL INTERVALS.

38. It is difficult to define what a musical interval is, because it cannot be perceived either by the sense of sight or touch. Yet such a thing can be understood as existing; for between any two sounds recognized in music, we can conceive the possibility of producing one, or several other, sounds, which are higher than the lowest, and yet not so high as the highest of the two sounds. For example, between the sounds Do and Re (be they what they may) there can be sounds higher than Do and lower than Re. Hence we say there is a distance, or interval, of a certain kind, between these sounds.

39. Musical intervals are generally represented by the ratios of the vibrations of musical strings, or, which is the same, by the ratios of the waves of the atmosphere. Hence the intervals of the major diatonic scale are as follows :—

1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,
Do,	Re,	Mi,	Fa,	Sol.	La,	Si,	Do,
1;	$\frac{9}{8}$;	$\frac{5}{4}$;	$\frac{4}{3}$;	$\frac{3}{2}$;	$\frac{5}{3}$;	$\frac{15}{8}$;	2.

40. The absolute magnitudes of these intervals are not so easily perceived by these ratios, but they can be clearly exhibited by means of the numbers called the logarithms of the ratios. For the addition or subtraction of intervals is made by the multiplication or division of the ratios; and this multiplica-

tion or division is performed by the addition or subtraction of the logarithms of the ratios. Hence addition of intervals corresponds to addition of logarithms, and subtraction of intervals to subtraction of logarithms.

The common logarithms will answer our purpose, from the tables of which we get the logarithm of—

$1 = 0{\cdot}0000$;
$\frac{9}{8} = 0{\cdot}0511$, which is the interval between the Do and Re;
$\frac{5}{4} = 0{\cdot}0969$, „ „ Do and Mi;
$\frac{4}{3} = 0{\cdot}1250$, „ „ Do and Fa;
$\frac{3}{2} = 0{\cdot}1761$, „ „ Do and Sol;
$\frac{5}{3} = 0{\cdot}2219$, „ „ Do and La;
$\frac{15}{8} = 0{\cdot}2730$, „ „ Do and Si;
$2 = 0{\cdot}3010$, „ „ Do and Do.

41 In the above major diatonic scale—

The interval between Do and Re is called a second;
„ „ Mi „ third (major);
„ „ Fa „ fourth;
„ „ Sol „ fifth;
„ „ La „ sixth;
„ „ Si „ seventh;
„ „ Do „ eighth, or octave.

42. If we suppose the above logarithmic decimal numbers to be multiplied by 10000, we can more conveniently represent the intervals by the whole numbers thus produced. Thus —

The interval of a second is 511;
„ third „ 969;
„ fourth „ 1250;
„ fifth „ 1761;
„ sixth „ 2219;
„ seventh „ 2730;
„ eighth „ 3010.

43. We can now find the relative magnitudes of intervals between any two sounds, by subtraction. Thus the interval

between Re and Mi is formed by subtracting the interval between Do and Re from that between Do and Mi—i. e. by subtracting 511 from 969, which gives 458 for the interval between Re and Mi. Hence we see the interval between the second and third is less than that between the first and second by fifty-three part out of 511.

44. This small interval, which is the difference between the intervals from Do to Re and Re to Mi, is called a "comma," and its representative number ·0053 is the logarithm of the ratio $\frac{81}{80}$.

45. By subtracting the interval between Do and Mi, 969, from the interval between Do and Fa, 1250, the remainder, 281, represents the interval between Mi and Fa.

46. In like manner, taking 1250, the interval between Do and Fa, from 1761, the interval between Do and Sol, we get the number 511. This number is also obtained by subtracting 2219, the interval between Do and La, from 2730, the interval between Do and Si (all these intervals being counted from the lowest sound).

47. Hence we find three equal intervals represented by the number 511, namely, one between the first and second, one between the fourth and fifth, and one between the sixth and seventh degrees of the scale.

48. By subtracting 1761, the interval between Do and Sol, from 2219, the interval between Do and La, the remainder, 458, presents itself once more; showing that the interval between the fifth and sixth degrees is exactly the same as that between the second and third.

49. By taking 2730, the interval between the (1st) Do and Si, from 3010, the interval of the octave, the remainder 280 is the interval between the 7th and 8th degrees, and which is the same as that between the 3rd and 4th.

50. By subtracting 2219, the interval between Do and La, from 3010, the interval between Do and its octave, the remainder 791 is the interval between the 6th and 8th degrees of the scale.

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51. The interval between any two consecutive sounds, as between Do and Re, Re and Mi, Mi and Fa, &c., is called a second. So the interval between any alternate sounds, Do and Mi, Re and Fa, Mi and Sol, is called a third. In like manner the intervals between Do and Fa, Re and Sol, Mi and La, are called fourths, &c. So that we have a 2nd, 3rd, 4th, 5th, 6th, 7th, or 8th, reckoned from any note whatever.

52. Hence we have three kinds of seconds, represented by the numbers 280, 458, and 511. Musicians call the first of these a *major semitone*, the second a *minor tone*, and the third a *major tone*.

53. There are likewise two intervals of thirds, represented by numbers 791 and 969; the former is called a *minor third*, the latter a *major third*.

54. There are also two kinds of fourths; one between Do and Fa, Re and Sol, Mi and La, Sol and Do, which are equal, and each is represented by the number 1250. The other is the interval between Fa and Si, the 4th and 7th degrees, whose number is 1480, found by subtracting 1250 (the representative of the interval between Do and Fa) from 2730 (the representative of the interval between Do and Si, the 1st and 7th degrees). Musicians call the smaller of these intervals the *minor fourth*, and the larger the *major fourth*.

55. By subtracting 791 (the minor third) from 969 (the major third), we get the remainder 178 for the interval, which is the difference between the major and minor thirds. This interval, 178, is called the *minor semitone*.

56. Lastly, by subtracting 969 (the major third) from 3010 (the octave), the remainder, 2040, represents the interval between Mi and the octave Do, which is called a *minor sixth*, inasmuch as there are six degrees from Mi (the third) to Do (the eighth), both included; and this interval of a sixth is less than the sixth from the first sound Do to the sixth La.

57. Hence we have the following table of intervals in the series of eight sounds, called the Major Diatonic Scale.

The Comma	53		
Minor semitone	178		
Major semitone	281		
Minor tone	458	equal to the sum of the	major and minor semitones.
Major tone	511		minor tone and comma.
Minor third	791		major tone and major semitone.
Major third	969		two tones.
Minor fourth	1250		major third and major semitone.
Major fourth	1480		minor fourth, minor semitone, and comma.
Fifth	1761		minor fourth and major tone.
Minor sixth	2040		fifth and major semitone.
Major sixth	2219		fifth and minor tone.
Seventh	2730		major sixth and major tone.
Eighth	3010		major seventh and major semitone.

CHAP. III.

ON TEMPERAMENT.

58. The intervals above represented are separated into two kinds, viz. *consonant* and *dissonant*. The consonant intervals are the major third, minor third, minor fourth (called also the perfect fourth), the fifth, the minor sixth, major sixth, and the octave.

59. Of these consonant intervals, the most perfect is the octave. The next perfect is the fifth, and after this the fourth; the minor third, major third, minor sixth, and major sixth, are called imperfect consonant intervals.

60. Two sounds at the interval of an octave, produced simultaneously, so perfectly coincide as to appear but one sound; and it requires a well-practised ear to distinguish their difference.

61. Two sounds at the interval of a fifth, heard simultaneously, produce the most perfect concord, when the number of vibrations of the higher sound is to the number of vibrations of the lower in the ratio of three to two, i. e. when there are three waves or vibrations of the one to every two of the other sound.

62. So also two sounds at the interval of a major third,

heard at the same instant, produce the most perfect agreement, when there are five waves of the one to every four of the other.

63. The most perfect division of the octave is that already represented in 39 and 42. But in this we find two kinds of minor thirds, viz. one between Re and Fa, whose interval is made up of a minor tone and a major semitone; and one between Mi and Sol, or La and Do, which consists of a major tone and a major semitone; the difference being a comma.

64. Consequently there are two kinds of major sixths, because a major sixth is the difference between a minor third and an octave.

65. Since the interval of a major third contains a minor third and a minor semitone, it is evident that if we wish to have a sound which shall be a major third above Re, we must add a minor semitone *and a comma* to the minor third between Re and Fa.

66. Again, there is a minor tone between Sol and La, and also between Re and Mi. The interval between Re and La is a fifth, but it is less than the fifth between Do and Sol, and therefore less perfect.

67. Hence there are two kinds of minor fourths, one of which is less perfect than the other, since a minor fourth is the difference between a perfect fifth and an octave. In short there is but one absolutely perfect interval, namely, the octave.

68. If all music could be composed so that it might be performed in one position of the scale, and required no harmonies except such as can be produced by combinations of the sounds which belong only to the scale, both the melody and the harmony would be the most perfect. But this does not happen, and not only are sounds foreign to the scale required for the harmony, but the scale itself must be in more positions than one, that is the first sound Do cannot always be C, but may be a sound half a tone, tone, or any other interval, higher or lower than C, within the octave.

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69. Representing the major scale, commencing with C, by the letters arranged in order we have—

1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,
C,	D,	E,	F,	G,	A,	B,	C.
Do,	Re,	Mi,	Fa,	Sol,	La,	Si,	Do.

70. Now, if the series be made to commence with the second D of this series, we have—

1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,
D,	E,	F,	G,	A,	B,	C,	D,
Do,	Re,	Mi,	Fa,	Sol,	La,	Si,	Do.

But in the former series the interval between Do and Sol is a perfect fifth, whose number is 1761; whereas, in this second series, the fifth from D to A is less than perfect by the interval 53, called a comma. Moreover, the interval between D and E, the Re and Mi of the first series, is a minor tone, whereas the distance between the first Do and second Re should be a major tone. And again, we have seen that, in order to make a major third from the first to the third, the sound must be a minor semitone and a comma above F, the third in the second series above. Hence we may see there are many imperfections in this scale, consequent on the removal one step higher.

71. In former times there were six positions of the major diatonic scale; but as only one of the scales, viz. that seated on or commencing with C, could be perfect on those instruments whose tones were fixed, it became necessary to find out a method of dividing the octave from C to C, so that the scale should be equally *imperfect* in every position, for in no position could it be perfect, without being more or less imperfect in all other positions.

72. We see that the octave from C to C contains two major semitones, two minor tones, and three major tones; also that each minor tone contains exactly one major and one minor semitone, but that each major tone contains more than one major and one minor semitone; and the octave cannot be divided into

major and minor semitones, because an interval made up of the three commas, that is, the sum of the differences of the three major tones, is not so great as a minor semitone, for $53 \times 3 = 159$, whereas the minor semitone is 178.

73. Of all the ingenious contrivances found out and put in practice, no one answers the purpose so well as the division of the octave into twelve equal parts, called *mean semitones.* Supposing the whole interval of the octave to be divided into 3,010 parts, each mean semitone contains $250\frac{5}{6}$, or, in even numbers, 251 of those parts.

74. By means of this division called *equal temperament,* we can tune fixed-toned instruments, such as the organ and pianoforte, in such a manner that any sound thereon may be the seat, or pitch-tone, of the scale; and twelve scales can be performed, equally, or very nearly equally, perfect; differing from each other in pitch only.

75. The advantages of this equalization of the semitones relates only to fixed-toned instruments, since it enables a pianist to perform in any position of the scale he may desire; but the disadvantages are that the music is never so agreeably in tune, its melodies are never perfect, nor are the harmonies; for, except the octaves, every interval, in every position of the scale, is false and deficient in richness of effect; and moreover, the music performed, be it what it may, possesses much insipidity. These are disadvantages which never occur, or never ought to occur, in music performed on instruments whose tones are free.

76. By this division of the octave into twelve mean semitones, we have the following—

Table of Intervals.

The mean	semitone $\frac{3010}{12}$	.	.	. .	=	251
,,	tone . .	=	2	mean semitones	=	502
,,	minor third	=	3	,,	=	752
,,	major third	=	4	,,	=	1004
,,	perfect fourth	=	5	,,	=	1255
,,	perfect fifth	=	7	,,	=	1756

The mean	minor sixth	= 8	mean semitones	=	2007
„	major sixth	= 9	„	=	2258
„	minor seventh	= 10	„	=	2508
„	major seventh	= 11	„	=	2759
	octave . .	= 12	„	=	3010

77. Hence the mean semitone is less than the major semitone by thirty parts out of 3,010, and greater than the minor semitone by seventy-three parts out of 3,010. Consequently—

The mean	tone is less than the major tone			by 9	parts.
„	tone is greater than the minor tone			44	„
„	minor third is less	than the true	minor third	38	„
„	major third is greater	„	major third	35	„
„	perfect fourth is greater	„	perfect fourth	5	„
„	perfect fifth is less	„	perfect fifth	5	„
„	minor sixth is less	„	minor sixth	35	„
„	major sixth is greater	„	major sixth	38	„
„	minor seventh is greater	„	minor seventh	9	„
„	major seventh is greater	„	major seventh	30	„

78. We perceive by this table, that the greatest imperfections in the concordant intervals occur in the minor thirds and major sixths ; the next greatest imperfections are in the major third and minor sixth ; the least imperfect intervals being the perfect fourths and perfect fifths. And thus it happens, that the thirds in all chords performed on fixed-toned instruments, are so disagreeably out of tune, and the richness of the harmony destroyed, or at least very much deteriorated.

CHAP. IV.

ON TUNING FIXED-TONED INSTRUMENTS.

79. When two musical sounds, whose waves are nearly equal in length, are produced simultaneously, a succession of pulses, called beats, is distinctly heard. These beats are less frequent

the nearer the two sounds which produce them are to unison, or perfect coincidence. The same phenomenon occurs whether the sounds be very nearly an octave, or a perfect fifth apart from each other, the beats being distinctly heard, and less frequent as the concords become more perfectly in tune, i.e., as they approach perfection, the beats being lost when the perfection is absolute.

80. Hence in tuning a fixed-toned instrument, the operator has a sure guide for all unisons and octaves, which must be always perfect, and therefore no beat must be heard.

81. But in tuning the fifths, since these cannot be tuned perfect on fixed-toned instruments, the beats must be attended to in order that the imperfections in these concordant intervals may be the least possible.

82. As the object of this Treatise is to avoid all intricate mathematical calculations, the results thereof can only here be given, for the sake of those who may desire to know by what means a piano-forte or organ can be tuned so as to divide the octaves into twelve mean semitones.

83. The first thing necessary is to fix the pitch of the sound from whence all the other sounds are to be tuned. This standard sound on the organ is middle C, or, as it is called, two foot C; i.e., the C produced by a two foot metal pipe of the principal stop, or a two foot two inch wooden pipe of the Dulciana stop. This is the sound whose number of vibrations per second is 256.

84. This sound (or as it is also called, note) C is also employed as the pitch for tuning piano-fortes to "concert pitch." So also is the note (or sound) A above this C, whose number of vibrations per second is 420. And some persons prefer tuning a piano-forte from this A, than from C

85. The pitch being fixed, the next thing is to tune all the octaves both above and below it. Then proceed to tune the perfect fifths, both ascending and descending. Proceeding from C to its fifth, G, upwards; then downwards from this G to its octave. Upward again from this last G to its fifth, D; then

the octave D below; so again to A the fifth to this last D, and so on until the sounds C, G, D, A, E, B, F♯, C♯, are all in tune. Then tune F a perfect fifth below the pitch note C, next its octave above; after which tune B♭, the perfect fifth below this octave F, as also the octave B♭ below and above. Lastly tune E♭ the perfect fifth below B♭, and the octaves thereto, and by these means the whole twelve sounds of the octave are obtained.

86. But in order that the imperfections in the fifths may be the least possible throughout the instrument, these concords must be tempered by means of the beats, and as the number of beats is different for each fifth, the following table, taken from Mr. Woolhouse's excellent and useful work on "Musical Intervals, Temperament," &c., is here inserted for the sake of beginners. The noise produced by these beats resembles the words "who ah," "who ah," and the fifths are to be tuned so that the number of beats in *ten seconds* of time shall be as follows:

For the fifth between

C	and	G	17
G	„	D	13
D	„	A	19
A	„	E	14
E	„	B	22
B	„	F♯	16
F♯		C♯	12
C♯		G♯	18
C	„	F	11
F	„	B♭	15
B♭		E♭	20

beats in ten seconds of time.

Method of finding the number of Vibrations in any given Sound.

The best material for this purpose is piano-forte wire, and the machinery necessary for the experiment is very simple. It may consist simply of a board furnished with two bridges, or

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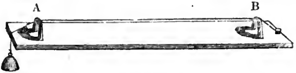
narrow-edged blocks, A. B. for the purpose of sustaining the



vibrating part of the wire, clear of the board:. one of them must be moveable, the other may be fixed.

Take a quantity of the wire, measure and weigh it very accurately; fix one end to the board, and pass the wire over both bridges so as to touch them both lightly, and stretch it by means of a weight; the friction will be less if the board be fixed upright, so as to let the string be stretched vertically.

Now let the given sound be constantly heard, and let the part of the wire between the bridges be put in motion, and move the bridge so as to lengthen or shorten the vibrating part, until its sound perfectly coincides with the given sound.

This done, *measure* in inches the vibrating part, from A to B, very accurately, and find by calculation the length of a quantity of the wire whose *weight equals that by which it has been stretched*, which can be done, of course, by the already known length and weight of the piece used in the experiment.

Reduce the length thus found to inches, and multiply the square root of the number thus found by 9·827, and divide the product by the length of the vibrating part of the string (between the bridges A. B.) The quotient will be the number of vibrations sought.

Ex.—In an experiment to find the number of vibrations made by an organ pipe, sounding mean C at what is called the Philharmonic pitch, (and which is a mean of all the other "pitches" in Europe, or nearly so,) Webster's steel piano-forte wire was used. One end of a piece measuring 144 inches, and weighing ten drachms, was fixed over the nut of a violin, and the wire was stretched over the bridge by a force of 24 lbs. avoirdupois. Hence 24 lbs of this wire would measure 88,474 inches; the square root of which is 297·445, and this multiplied by 9·827 gives 2923, which divided by 11·4 the length of the vibrating part of the string, gives 256·4 for the number of vibrations of the mean C.

In another experiment made with wire, 311 inches of which weighed 476⅜ grains, stretched by the same weight and in the same manner, a length of 12⅜ inches producing the same sound from a fork tuned to the so called Philharmonic pitch, gave 257 vibrations, very nearly. Hence we may consider the Philharmonic pitch to be 256 vibrations for the mean C.

DIVISION II.

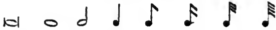
CHAP. I.

MUSICAL NOTATION.

1. In the preceding division of this little work an endeavour is made to convey to the young musical student an idea of musical sounds, their causes, by what means they are produced, the proportions of the degrees of what is called the musical scale, the relative distances of each sound therein from one another ; the true construction of the scale, for what reasons this is departed from, and several other matters so intimately connected with the practical part of the art, that without some knowledge of the true theory of musical sound, no student can acquire even a mediocre proficiency in composition, nor understand the numerous authors who have written on music, nor comprehend their various opinions.

2. It will be endeavoured in this division of the subject, to give the practical use of musical sounds, their connection in the formation of melodies and harmonies. But in the first place it is necessary to explain the characters used in the musical art, or as it is called, Musical Notation.

3. Every sound employed in the art of music is represented, at some time or other, by one of the following characters—

 &c.

These are called Notes.

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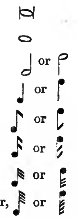
The first note	is called a	Breve,
second	,,	Semibreve,
third	,,	Minim,
fourth	,,	Crotchet,
fifth	,,	Quaver,
sixth	,,	Semiquaver,
seventh	,,	Demisemiquaver,
eighth	,,	Semi-demisemiquaver,



4. The notes are placed on and between five equidistant, parallel, and horizontal straight lines, drawn across the paper from margin to margin, thus:

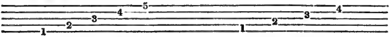
These lines form what is called the Staff, or stave.

5. Any note placed on the bottom line represents a sound which is deeper, or lower in pitch, than that which is represented by any note on any other line of the staff, and any note placed on the top line represents a sound which is higher than that represented by a note on any other of the five lines.

6. In like manner, a note placed in the space between the two lower lines, represents a lower sound than that which it would represent in the space between any other two lines.

7. Hence a note represents a higher, or a lower sound, according as it is placed higher or lower on the staff.

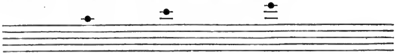
8. The lines of the staff are reckoned *upward;* the lowest is the first, the highest the fifth; also the space between the two lowest lines is the first space, and that between the two upper lines is the fourth. The staff contains therefore five lines and four spaces.



Lines. Spaces.

9. The notes are the representatives of the sounds, and hence the word note is often used for the word sound.

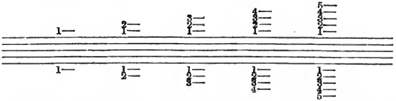
10. When a sound is higher than that which may be placed on the fifth line of the staff, the note which is its representative is placed on a short line above the staff, thus—



and there will be one, two, or more short lines between that on which the note is placed and the staff, according to the height of the sound.

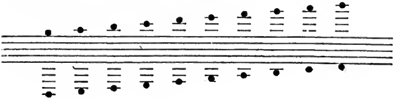
11. Again. The notes are also placed on short lines below the staff, when they represent sounds which are deeper or lower than those represented by the notes on the staff, and a note will be one line, two, or several lines below the staff, according to the depth of the sound to be represented.

12. These short lines are therefore temporary, and they are called Ledger lines.



Ledger lines are reckoned upwards when they are placed *above* the staff, and downwards when placed *below* it; and seldom exceed five in number; their order is shown by the figures in the diagram.

13. A note may also be placed in the space between any two ledger lines, and also in the space between the staff and the first ledger line above or below it, thus:



14. It has been said in the first division of this work, that the total number of musical sounds is comprised within nine octave series; and as each series will require seven notes to represent it, there would be required sixty-three places for the notes. But in the written language of music not more than seven octave series are employed; yet these require forty-nine lines and spaces for the representative notes.

15. The five lines of the staff, with five ledger lines above it, and five below it, together with the fourteen spaces between all these, will contain but twenty-nine notes out of forty-nine. Hence musicians are compelled to use more than one staff.

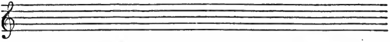
16. Now the number of notes can be so divided as to place about one half on one staff, so that all the lower sounds can be represented by notes on one staff, and all the upper sounds by notes on another, and the two staves can be brought together so as to enable us to represent all the sounds at one view.

17. The staff which contains the upper notes is called the *Treble staff*, and that which contains the lower notes is called the *Bass staff*.

18. The treble and bass staves are distinguished by means of two characters, marked thus, and or These are called respectively the G clef, and F clef.

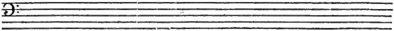
19. The G clef is placed on the second line of the treble staff, and hence the treble staff is denoted by this character placed at the beginning of the staff, thus:

Treble Staff, or Stave.



20. The F clef is placed on the fourth line of the bass staff, and hence the bass staff is denoted by this character placed at the beginning of the staff, thus: .

Bass Staff, or Stave.

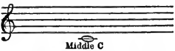


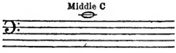
The positions of the clefs are shown by the two dots placed on each side of the line.

21. It is seen in the first division of this work, that an octave series contains eight sounds; and that the first and eighth so perfectly coincide as to appear but one sound, when heard at the same instant. Hence musicians always denote two sounds, which are octaves to each other, by the same letter of the alphabet (or, if syllables are used instead, by the same syllable), consequently the whole series can be represented by seven letters only.

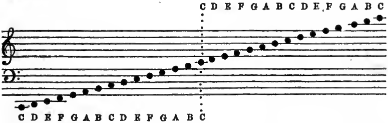
22. Hence musical notes receive the name A, B, C, D, E, F, or G, according to their positions on the staves.

23. The first sound of the fifth octave series mentioned in the first division, and there called middle C, (inasmuch as the fifth octave series is the middle series of the whole nine series,) is represented in musical notation by placing a note on the first ledger line *below* the treble staff, or on the first ledger line *above* the bass staff, thus :





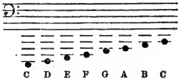
24. Hence if we place the bass staff under the treble staff, and make use of one ledger line between these two staves, we can represent four octave series of sounds by using two additional ledger lines only, both above the treble and below the bass staff.

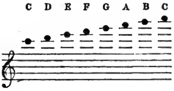


25. We are now able to perceive why the clef on the treble staff is called the G clef; simply because it is placed on the

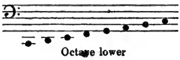
same line (the second) with the note called G. So also we perceive the F clef is so called because it is on the same line with the note called F.

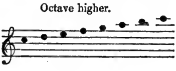
26. It seldom happens that any useful music is written more than *one octave* below the lowest C in the bass, or more than *one octave* higher than the highest C, in the above example. To complete the octave below the abovementioned bass note C, there will be three additional ledger lines required below the bass staff; and to complete the octave above the C, also above mentioned, we must have three additional lines above the treble staff.





27. Now if these notes are required (and they very often are required) to be read very rapidly, there is considerable difficulty in discovering the note in consequence of the number and confusion of the ledger lines. Moreover, it is not only embarrassing, but injurious to the eyesight, to have to read so many small signs. Musicians therefore prefer denoting the very high sounds by writing the notes an octave lower than they ought to be, and giving directions to the performer to play them an octave higher than they are represented. In like manner, the very deep sounds are represented an octave higher than they really are, the performer being directed to play them an octave lower. In this way the last example can be written :





By these expedients the bass and treble staves are made to contain six octave series, or forty-three notes.

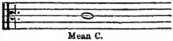
28. But so extensive a range as six octave series can only be obtained on such instruments as the pianoforte, &c.; and when instruments of lesser compass are employed, some of them must produce the higher sounds, others the lower. It happens, moreover, that neither the treble instruments nor the base can produce the intermediate series of sound with such fulness and sweetness as those upper or lower sounds have, which are more appropriate to the peculiar functions of the instruments which produce them. This is the case, also, with the human voice, the most perfect of all musical instruments, when well instructed.

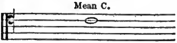
29. Hence it not only becomes necessary to have voices and instruments to produce the intermediate series, but it is also necessary to have a staff on which to write the notes of these series, otherwise we must make use of scarcely any but ledger lines.

30. To avoid the trouble and difficulty arising from the use of numerous ledger lines, musicians have invented an intermediate staff, on which they can place all the lower treble notes, and all the upper bass notes.

31. This intermediate or middle staff is formed by taking the ledger line on which middle C is placed as a central line, over which they place one or more of the lower lines of the treble staff, and under it one or more of the upper lines of the bass staff, forming, in either case, a staff of five lines. The ledger line, of course, forming one of the five by being continued across the book and made of the same length as the other four lines.

32. The intermediate staff, or, as it is usually called, the *mean* (or middle) staff is distinguished by this character 𝄡 or 𝄡 called the C clef, and which is placed at the beginning of the mean staff, and on the same line with mean, or middle C. Thus





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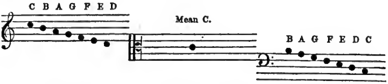
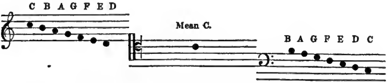
33. The first of these staves is formed out of the mean C line, the two lower lines of the treble, and the two upper lines of the bass. Thus:

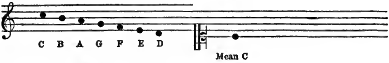


The second example is similarly formed of the same mean C line, the first line of the treble, and the upper three lines of the bass staff.



34. The mean staff is called the *Alto staff*, when the mean clef is on the third line; and when this character is on the fourth line, the staff is called the *Tenor staff*.

35. In vocal music it is often necessary to have the music performed by a female voice, whose function is appropriate to the lower treble sounds; and as this kind of voice is generally confined to these sounds, the notes are placed on another kind of mean staff made up of the same mean C line as before, together with four lines of the treble staff.

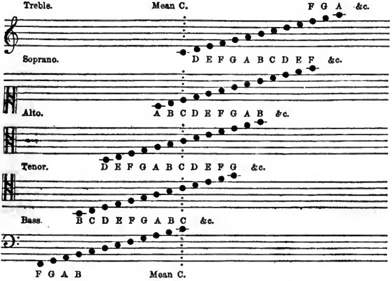


This staff is called the *Soprano staff*.

36. When the lower treble descends below this staff, another line is placed below mean C line, and the top line is taken away. The staff then consists of the three lower lines of the treble staff, the mean C line, and the fifth, or upper line, of the bass staff.

37. Thus we have four mean or intermediate staves denoted by the different positions of the mean clef. But composers now usually make use of three only, viz. the Soprano, the Alto, and the Tenor.

38. We have now formed five staves, and these answer the purposes of composers very well. These staves take their relative positions according to the range of the notes they contain. Thus the treble is placed first, or highest; the soprano, second; the alto, third; the tenor, fourth; and the bass, fifth, or lowest.



By this diagram we can perceive those notes which are identically the same on two or more staves.

39. These five staves are exceedingly useful; and no one of them can possibly be put aside; nor can any one be made a substitute for another, without great disadvantage and impropriety. There have been many attempts to do away with the mean staves, but without success. There has been an idea that there is an unnecessary difficulty in having to read so many staves, but it is merely an idea. It would be exceedingly in-

convenient to write music for choirs and orchestras without these staves. Indeed all music intended for intermediate voices or instruments should be written on the proper intermediate staff, thereby preventing innumerable mistakes.

CHAP. II.

ON MUSICAL INTERVALS.

1. In the first division is shown the various intervals contained within the octave series of sound, when it is regulated most perfectly in accordance with nature. It is there stated that there are two kinds of minor thirds, major thirds, perfect fifths, &c. But in practical music only one kind of minor third, major third, perfect fifth, &c., is recognized. Moreover, no notice is taken of the very small interval called a comma. All intervals called tones are equal. The only unequal intervals are the major and minor semitones. No such interval as a mean semitone exists in musical composition; it is only on such instruments as the pianoforte, organ, &c., whose tones are fixed, that the mean semitone is substituted for either a major or minor semitone.

2. In practical music the simple elementary intervals are the minor and major semitones, and every other interval is obtained by the addition of one or both of these.

3. An interval containing *one major semitone* and *one minor semitone* is called a *tone*, or *second.*

An interval containing *a tone* and *a minor semitone* is called an *augmented tone*, or *augmented second.*

An interval containing *two major semitones* is called a *diminished third.*

An interval containing *a tone* and *a major semitone* is called a *minor third.*

An interval containing *two tones* is called a *major third.*

An interval containing *a tone* and *two major semitones* is called a *diminished fourth.*

An interval containing *a major third* and *a major semitone* is called a *perfect,* or *minor fourth.*

An interval containing *three tones* is called a *tritone,* and also a *major fourth.*

An interval containing *two minor thirds* is called an *imperfect,* or *false fifth.*

An interval containing *a major third* and *a minor third* is called a *perfect fifth.*

An interval containing *two major thirds* is called an *augmented fifth.*

An interval containing *a minor third* and *a perfect fourth* is called a *minor sixth.*

An interval containing *a major third* and *a perfect fourth* is called a *major sixth.*

An interval containing *a major third* and *a tritone* is called an *augmented sixth,* also a *superfluous sixth.*

An interval containing *three minor thirds* is called a *diminished seventh.*

An interval containing *a perfect fifth* and *a minor third,* or (which is the same) *a major third* and *two minor thirds,* is called a *minor seventh.*

An interval containing *a perfect fifth* and *a major third,* or (the equivalents) *two major thirds* and *a minor third,* is called a major seventh.

These, together with the octave, are the principal intervals in the practical science of music.

4. From the foregoing, therefore, we get the following table of musical intervals:—

Minor semitone.		
Major semitone.		
Tone	containing	one major semitone and one minor.
Augmented tone . . .	„	a tone and a minor semitone.
Diminished third . . .	„	two major semitones.

Minor third	„	a tone and a major semitone.
Major third	„	two tones.
Diminished fourth . .	„	two major semitones and a tone.
Minor, or perfect fourth	„	two tones and a major semitone.
Major fourth, or tritone	„	three tones.
Imperfect, or false fifth	„	two minor thirds.
Perfect fifth	„	a major third and a minor third.
Augmented fifth . . .	„	two major thirds.
Minor sixth	„	a minor third and a perfect fourth.
Major sixth	„	a major third and a perfect fourth.
Augmented sixth . . .	„	a major third and a tritone.
Diminished seventh . .	„	three minor thirds.
Minor seventh	„	two minor thirds and a major third.
Major seventh	„	two major thirds and a minor third.
Octave	„	a perfect fifth and a perfect fourth.

5. From this table we perceive those intervals which are greater than perfect, or major, are called augmented; and those which are less than minor are called diminished.

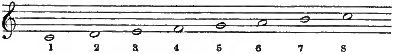
CHAP. III.

ON THE MAJOR SCALE.

1. From the perfect coincidence which exists between any two sounds distant from each other at the interval of an octave, and which are therefore called by the same name, we can perceive that whatever distance exists between any two sounds within one octave series (as between C—D, D—E, &c.; C—E, C—F, &c. &c.) there must be precisely the same distance between their octave sounds, double octave sounds, &c.; i. e., between any two corresponding sounds in any other octave series.

2. We may therefore take any one of the octave series and examine the intervals between any two notes therein contained, and the results will be the same for any other octave series.

3. For this purpose it is found most convenient to employ the middle (or mean) octave.



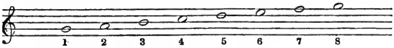
4. It is evident, on inspection, this series (and therefore every other octave series) contains five (mean) tones, and two major semitones (*vide* Division I., 73).

5. This series is called the Diatonic Scale,* the steps or degrees of which are as follows:

From the	1st note C	to the	2nd note D	is the step of a	tone.
„	2nd note D	„	3rd note E	„	tone.
„	3rd note E	„	4th note F	„	major ½ tone.
„	4th note F	„	5th note G	„	tone.
„	5th note G	„	6th note A	„	tone.
„	6th note A	„	7th note B	„	tone.
„	7th note B	„	8th note C	„	major ½ tone.

6. This is the model of several other Diatonic scales. It is quite arbitrary what note a scale shall commence with. It may be D, E, F, G, or A, as well as C. But when it is made to commence with any other note than C, there is a derangement in the order of the intervals, so that there will be semitones where there ought to be tones, and *vice versâ*.

7. If we assume the note G for the initial note of a Diatonic scale, the octave series will be as follows:



In which the step from

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* This is the form of the ancient gamut, called the "Eleventh Ecclesiastical Tone."

The 1st note G to the 2nd note A is a tone.

2nd note A	„	3rd note B	tone.
3rd note B	„	4th note C	semitone.
4th note C	„	5th note D	tone.
5th note D	„	6th note E	tone.
6th note E	„	7th note F	½ tone.
7th note F	„	8th note G	tone.

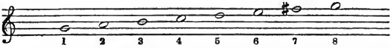
8. In this scale the interval between the sixth and seventh degrees is a semitone, and that between the seventh and eighth degrees* is a tone: these intervals are therefore displaced, for in the model scale the interval between the sixth and seventh degrees is a tone, and that between the seventh and eighth degrees is a semitone.

9. Hence the sound called F is not the right one, according to the model, and it must give place to another sound which is a tone above E, or which is the same thing, a major semitone below G.

10. Now since a tone contains a major semitone and a minor semitone, and there is already a major semitone between E and F, this new sound must be a minor semitone above F. Moreover, because the sound called F is removed, its representative letter is also removed.

11. But rather than introduce a new letter into the language of music, musicians have invented a character marked thus, ♯, and called a *Sharp*.

12. This character, placed before the note F, denotes a sound a minor semitone higher than F itself, and which is called "sharp F." With this new note therefore the scale is regulated, and made symmetrical with the model scale.



13. Let us now assume the note F, the fourth degree of the

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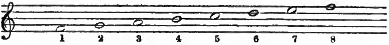
* This form is one of the ancient gamuts, called the "Seventh Ecclesiastical Tone."

model scale, for the initial note of another series. This scale will be as follows :



And the interval between the

1st note F	and the	2nd note G	is a	tone.
2nd note G	„	3rd note A	„	tone.
3rd note A	„	4th note B	„	tone.
4th note B	„	5th note C	„	semitone.
5th note C	„	6th note D	„	tone.
6th note D	„	7th note E	„	tone.
7th note E	„	8th note F	„	semitone.*

14. Here also are two displacements, one of the major semitone, which ought to be between the third and fourth degrees, and of the tone which ought to be between the fourth and fifth degrees.

15. This derangement of the symmetry of the scale is caused by the sound called B, which is a whole tone distant from A, instead of being only a major semitone distant therefrom. This sound must therefore be removed, and a new sound which is a minor semitone below it must take its place.

16. Because the sound and its letter B are both removed, and in order to prevent the necessity of using a new letter to denote the new sound which is to supply its place, musicians have invented another character marked thus, ♭, and called a *flat*.

17. This character placed before the note B denotes the sound which is a minor semitone below B itself. The new sound is then called *flat* B.

18. And since there is a tone distance between A and B, and a minor semitone between B and ♭ B ; there is a major semitone between A and ♭ B.

19. Moreover, because the interval between ♭ B and B is a

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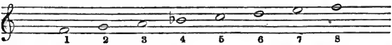
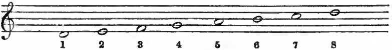
* This form is another of the ancient gamuts, called the "Fifth Ecclesiastical Tone."

minor semitone, and that between B and C is a major semitone, the whole interval between the new sound ♭B and C is a tone, and the scale is hereby made symmetrical with the model scale.



20. We can perceive from what has just been said, that the word sharp, in musical language, signifies *elevation*, and the word flat, *depression*, and that the characters ♯ and ♭ are respectively, signs of elevation and depression. So that ♯F means an elevated F; ♭B, a depressed B.

21. In a like manner let D be taken for the initial note of the scale, then the degrees will be in the following order :



Here there is derangement of intervals between the second and third, and third and fourth degrees, and also between the sixth and seventh, and seventh and eighth degrees.* But as we have seen in (12), the note F being removed, and ♯F being inserted in its place, the interval of the major semitone will be between the third and fourth degrees, viz. between ♯F and G, and there will be at the same time a tone distance between E and ♯F, the second and third degrees. This part of the scale is therefore adjusted by means of ♯F.

22. But there remain the intervals between the sixth and seventh, and between the seventh and eighth to be rectified. This must be done by removing C, which is only a major semitone from B, and supplying its place with a new sound a minor semitone higher than C; and it will be readily supposed that this new sound must be an elevated C, or ♯C, which will be a tone distant from B, and of course, there will then be a major semitone between ♯C and D. This is all that is requisite to

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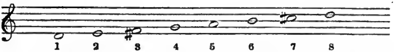
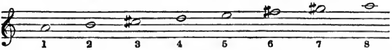
* This is the form of the ancient gamuts, called the "First and Eighth Ecclesiastical Tones."

adjust this new scale, and make it symmetrical with the model scale.

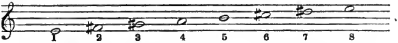


23. By assuming the note A for the first note of another scale, we shall find it necessary to introduce three new sounds in the room of those which must be removed. Two of these new sounds are already found, viz. ♯F, and ♯C; the third we find to be ♯G, and the new scale will be formed thus:



24. By means of ♯G, the interval between the seventh and eighth degrees is a major semitone, by means of ♯C, the interval between the third and fourth degrees is also a major semitone, which therefore coincide with the model scale. Moreover, the interval between ♯F and ♯G is a tone, because both these notes are elevated a minor semitone, the one above F, the other above G; and as there is a tone distance between F and G, there must be also a tone between ♯F and ♯G. And we have already seen that there is a tone between B and ♯C, and also between E and ♯F. This scale is therefore symmetrical with the model scale.

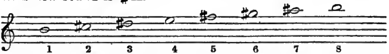
25. By similar means we obtain another new scale which will require the three new sounds ♯F, ♯C, and ♯G, already found, and a fourth new sound which is introduced between the seventh and eighth degrees, precisely in the same way as all the others have been introduced. The scale now mentioned is made to commence with E.



26. We easily perceive there is a tone between E, the first, and ♯F, the second; also between ♯F, the second, and ♯G, the third degrees; and the interval between ♯G and A, the

third and fourth, is a major semitone: and also there is a tone between A, the fourth, and B, the fifth; also between B, the fifth, and ♯ C, the sixth degrees; and as ♯ D is an elevated D, (i. e., a note representing a new sound a minor semitone higher than D,) the interval between it and E is a major semitone; and that between ♯ C and ♯ D is a tone, because there is a tone between C and D, and both these are elevated a minor semitone. This scale is therefore symmetrical with the model scale.

27. Let us now take the remaining note B, of the model scale, for the first note of another octave series, and we shall find a fifth new sound in addition to the four already found. This new sound is ♯ A.

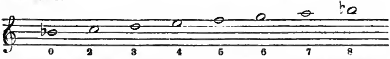


28. In this scale the semitones are between ♯ D, the third, and E, the fourth degrees; and between the new sound ♯ A, the seventh, and B, the eighth degrees; moreover ♯ A is a tone distant from ♯ G, because A and G, whose places they supply, are a tone distant from each other. This scale is symmetrical with the model scale.

29. We have now introduced five new sounds, viz. one, ♯ F, in the scale commencing with G; a second, ♯ C, in that commencing with D; a third, ♯ G, in the scale commencing with A; a fourth, ♯ D, in that beginning with E; and the fifth, ♯ A, in the scale beginning with B.

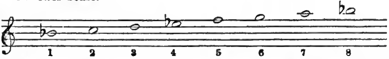
30. By reverting to § 19, it is seen that the scale commencing with F, is adjusted and made symmetrical with the model scale by means of a new sound in the room of B, namely, ♭ B, or depressed B.

31. This sound, ♭ B, may be taken as the initial note of a new scale:—

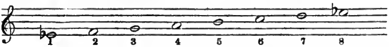


It has been already shown (in 19) that the interval between

A and ♭ B is a major semitone; hence the seventh and eighth degrees of this new scale require no adjustment; but looking at the fourth note E, we see it is a tone distant from D. Now D is the true third of the scale, for it is seen (in 19) that the distance from ♭ B to C is a tone, and so is the distance from C to D. But the interval between the third and fourth degrees ought to be a major semitone, whereas it is a tone; it is evident, therefore, that E is the note to be removed, and its place must be supplied by a sound which is a minor semitone lower than it, i. e., the new sound is ♭ E, or depressed E. This being a minor semitone lower than E, and E being a major semitone from F, the whole interval between ♭ E and F will therefore be a tone, and the new scale will now be symmetrical with the model scale.

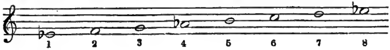


32. The last sound, ♭ E, may be also assumed as the first note of another new scale.

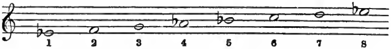


33. We soon perceive that this scale wants several adjustments, for as it now stands, the major semitone, which ought to be between the third and fourth degrees, is between the fifth, B, and the 6th, C.

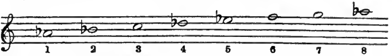
34. It is seen in 31, that the interval between ♭ E and F is a tone, and there is also a tone between F and G; consequently the first, second, and third degrees are correct. But the interval from G the third to A the fourth is too great; hence A must be removed, and its place supplied by a new sound, which it will be readily conceived must be a depressed or ♭ A, which is a minor semitone below A, and a major semitone above G.



35. But this scale is not yet symmetrical with the model scale, for the interval between B, the fifth, and C, the sixth, is only a major semitone, whereas it ought to be a tone. Moreover, the interval between ♭ A, the fourth, and B, the fifth, is a tone and a minor semitone, that is, it is a minor semitone too great. Hence B must be removed, and its place supplied by ♭ B, which will complete the adjustment of this scale, by making the intervals between the fourth and fifth, and between the fifth and sixth degrees a tone.

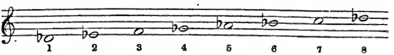


36. In like manner we can form a scale commencing with ♭ A, requiring the above three depressed notes, and also a fourth, viz. ♭ D, thus :—



37. This new sound, ♭ D, is a minor semitone below D, consequently it is a major semitone distant from C, and a tone distant from ♭ E. And by comparing all the other notes with the scale in 35, we see that all the tones and semitones are in the proper places, and that this scale is also symmetrical with the model scale.

38. We may also assume the last found ♭ D as the initial note, and we shall find another new depressed note, viz. ♭ G, with which, and the four flat notes already found, the scale will be formed symmetrically with the model scale, thus :—

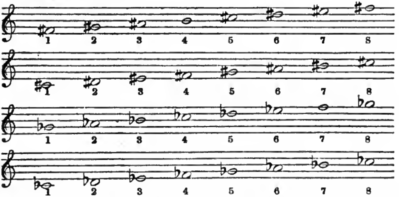


This additional new note, ♭ G, is a major semitone above F, and a tone distant from ♭ A, for reasons similar to those already given.

39. We have thus far eleven scales, viz.—

The model scale, commencing with C
The scale commencing with G, requiring ♯ F.
„ „ D, „ ♯ F, and ♯ C.
„ „ A, „ ♯ F, ♯ C, and ♯ G.
„ „ E, „ ♯ F, ♯ C, ♯ G, and ♯ D.
„ „ B, „ ♯ F, ♯ C, ♯ G, ♯ D, and ♯ A.
„ „ F, „ ♭ B.
„ „ ♭ B, „ ♭ B, and ♭ E.
„ „ ♭ E, „ ♭ B, ♭ E, and ♭ A.
„ „ ♭ A, „ ♭ B, ♭ E, ♭ A, and ♭ D.
„ „ ♭ D, „ ♭ B, ♭ E, ♭ A, ♭ D, and ♭ G.

40. These are the most useful scales employed in musical composition, but they are not all that can be formed on the model scale; there are four others formed on this model, viz. one having ♯ F for the initial note, one having ♯ C, one having ♭ G, and one having ♭ C, for the initial note. These scales are formed as follows:—



41. It will be perceived that by degrees all the original sounds in the model scale have been removed, and their places supplied by other sounds in two different ways—one by means of sounds a minor semitone higher than those in the model scale, the other by sounds a minor semitone lower.

42. Whence it follows that there are in reality twenty-one sounds—and their octaves, double octaves, &c., both above and below—employed in music, viz.—

C, D, E, F, G, A, B.
♭C, ♭D, ♭E, ♭F, ♭G, ♭A, ♭B.
♯C, ♯D, ♯E, ♯F, ♯G, ♯A, ♯B.

43. The octave sounds to every one of the foregoing new sounds are also new sounds, whether they are below or above them, and each takes the same prefix, that is, the octave to any elevated sound, being also an elevated sound, requires a ♯ prefixed to its representative note ; so also the octave to any depressed sound, being likewise a depressed sound, its representative note must therefore have a ♭ prefixed. In other words, all notes which are an octave, or any number of octaves apart, are called by the same name.

44. We have seen that the interval between the first and second, and between the second and third degrees of the foregoing scales, is a tone ; consequently, the interval between the first and third is (two tones, i.e.) a major third. See Chap. II. § 4. For this cause the scales themselves are called ***major scales.***

45. In order to avoid the trouble of reading and writing the prefixes ♭ and ♯ so very often, and to exhibit the scale free from this incumbrance, musicians have agreed to place all the sharps or flats required in the formation of a scale at the commencement of every staff, immediately after the clef ; observing to place them in the order in which they have been introduced, on the line or in the space (at convenience), on or in which the note to which they belong is placed.

46. Moreover, each scale is called after its initial note ; scale C, scale G, &c., &c. And one scale is distinguished from another by the number of sharps or flats placed at the beginning of the staves. These sharps and flats are called the signatures of the scales.

It will be useful to exhibit the whole of the major scales, with their signatures, on the bass and treble staves, beginning with the scale ♯ C, requiring seven sharps, and passing through all the other scales requiring sharps, then through the model scale to those requiring from one to seven flats. Thus presenting—

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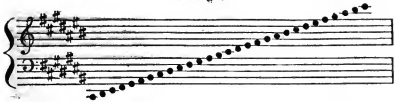
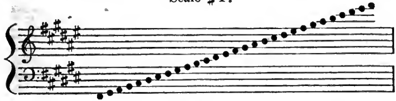
The Fifteen Major Diatonic Scales.

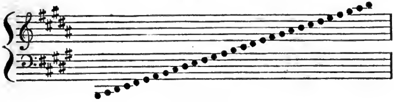
Scale ♯C.



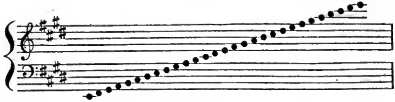
Scale ♯F.



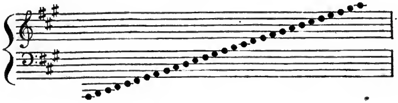
Scale B.



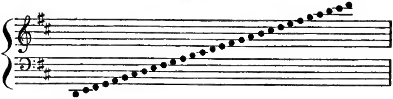
Scale E.



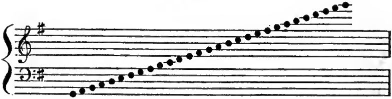
Scale A.



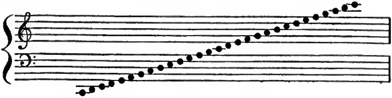
Scale D.



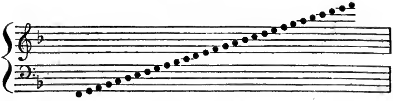
Scale G.



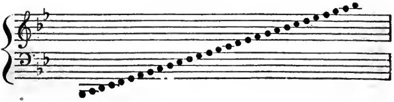
Model Scale C.



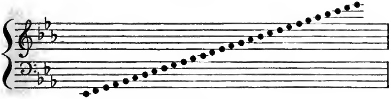
Scale F.



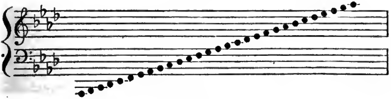
Scale ♭B.



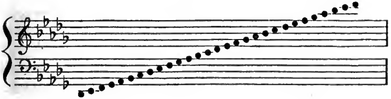
Scale ♭ E.



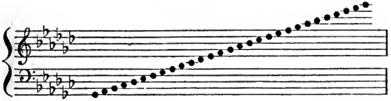
Scale ♭ A.



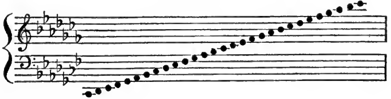
Scale ♭ D.



Scale ♭ G.



Scale ♭ C.



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47. It is evident the sharps and flats are mere signs of transposition of the model scale. In other words, there is but one major scale, and that it may be seated in fifteen positions, or rather, it may commence with any one of the fifteen sounds employed in music.

CHAP. IV.

ON THE MINOR SCALES.

1. There is another kind of diatonic scale, which differs from the major scale in many ways, and is called a minor scale.

2. The principal distinction of a minor scale from a major one is, that the interval between the first and third degress is a *minor third*, whereas in the major scale this interval is major.

3. But there are several forms of the so-called minor scale, which differ more or less from each other, and each may be taken as a model scale. Some of them consist of five tones and two major semitones, the same as the major scale, but the order of their intervals is not the same. Some forms of the minor scale have three major semitones, and one form has four. Three forms of the minor scale have a major semitone between the seventh and eighth degrees; two of them have an augmented second between the sixth and seventh degrees; and one of these again has two of these augmented intervals, besides an augmented sixth between the second and seventh degrees. Moreover, some species of minor scale have the major semitone between the first and second degrees, and the tone between the second and third.

4. Melodies composed by classical masters are found written in all these species of minor scale. Those which are most commonly considered as the minor scale take their origin from the major scale. These are three in number, although they are considered as modifications of each other. But a modification

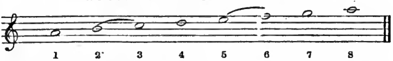
of a thing is no longer the thing itself; and therefore there are as many models of minor scales as there are minor scales actually employed.

5. Some authors assert there is no minor scale independent of a major scale—that every minor scale is derived therefrom. Others assert the minor scale is independent. The truth is, there is no minor scale which has not some things (few or many) in common with a major scale, although some of them are in some degree independent of it.

6. But whatever form may be given to the minor scales, four of them are represented as being founded on the sixth degree of the major scale.

7. The first form has all its degrees in common with the major scale, with this difference, that it commences at A, the sixth of the major scale, and has the semitones between the second and third degrees, and between the fifth and sixth.*

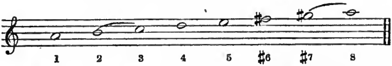
Form 1st of the Model Minor Scale.



Here the semitones are between the notes B and C, E and F, as in the major scale.

8. In the second form the semitones are between the second and third, as in the first form, and between the seventh and eighth, in which it is different from the first form, and is similar to the major scale in its upper four degrees.

Form 2nd of the Model Minor Scale.



Here we have a scale, the first four degrees of which are identical with the first form, the remaining four being wholly identical with the major scale on A. See Chap. III.

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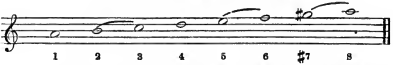
* This scale is the ancient gamut called the "Ninth Ecclesiastical Tone."

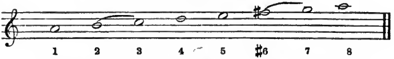
9. The third form also has one semitone between the second and third degrees, and between the fifth and sixth, but it has a third semitone between the seventh and eighth.

Form 3rd of the Model Minor Scale.



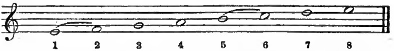
10. The fourth form has likewise one semitone between the second and third degrees, but its remaining semitone is between the sixth and seventh, herein it therefore differs from all the foregoing scales.*

Form 4th of the Model Minor Scale.



11. Besides the above there are five other forms, four of which are derived from the first four. From the first—

Form 5th† of the Model Minor Scale:



(a scale in which the semitones are between the first and second, and between the fifth and sixth degrees,) it has its origin on the fifth degree of the first form, and differs from it in construction, by having the lower semitone between the first and second, instead of between the second and third degrees.

12. The sixth form is derived from the second, in the same manner, viz. by having the fifth note of the latter for its origin, and all its notes in common, the difference being this—the semitone is now between the third and fourth, in which it is therefore similar to the major scale; the other semitone being

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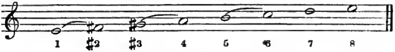
* This is the form of the "First Ecclesiastical Tone" of the ancients, originally seated in D.

† This is the ancient gamut called the "Third Ecclesiastical Tone."

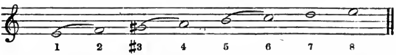
between the fifth and sixth degrees; and therefore this upper half of the scale is constructed like the fifth form.

Form 6th of the Model Minor Scale.



13. The seventh form is similarly derived from the third form.

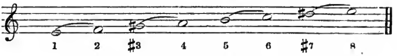
Form 7th* of the Model Minor Scale.



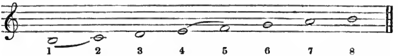
This scale has also a major third, but there are three semitones, one between the first and second, one between the third and fourth, and one between the fifth and sixth degrees.

14. The eighth form is a modification of the seventh, from which it differs by having a fourth semitone, placed between the seventh and eighth degrees.

Form 8th of the Model Minor Scale.



15. A ninth form† is also found, although it is less common. It is derived from the fifth form, by taking its fifth note for the origin.



This form belongs entirely to church music of the olden time, and also to the early reformed church hymn tunes, called by the German musicians, *Choräle.* In the ancient liturgical books and manuals this scale is usually found transposed four degrees higher.

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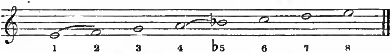
* This is the form sometimes given to the ancient "Third Ecclesiastical Tone."

† This is the "Fourth Ecclesiastical Tone" of the ancients.

Form 9th of the Model Minor Scale.



16. Of these nine forms, the most modern are Forms 3 and 8; the most ancient Forms are 1st, 4th, 5th, and 9th. The 2nd, 6th, and 7th belong to the Motet and Madrigal school of the sixteenth and seventeenth centuries. But the whole nine forms are found more or less employed by composers down to the present day.

17. There are only three forms, viz. the 1st, the 5th, and the derivative from the 5th (commencing on B), which have *all* notes in common with the model major scale; they have the semitones between the very same notes, (viz. B and C, and E and F), and are therefore the only scales that can strictly be called related to it. All the other forms are more or less different from the model major scale, and are therefore more or less independent, and foreign to it.

18. Now as each of the nine forms of the minor scale may be assumed as a model on which to construct other scales, and every one of the first four forms can be seated, or have its origin, on the sixth degree of the major scales, we have as many minor scales of each of these forms as there are major scales, viz. fifteen of each, or sixty in the whole four forms. Moreover, each of the remaining five forms can be seated on the third degree of any major scale; and hence there are fifteen of each form, or seventy-five in all the five forms, making with the former sixty, a total of one hundred and thirty-five minor scales.

19. Upon examining the intervals between the degrees of these various forms of the minor scale, we find the *augmented second*, (or augmented tone, see Chap. II. § 4,) *augmented fifth*, *augmented sixth*, *diminished third*, *diminished fourth*, and *diminished seventh*, in the more modern scales; while in the most

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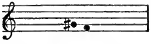
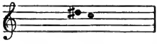
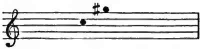
ancient, and in the major scales these augmented and diminished intervals are not found.

20. The augmented tone, or augmented second, is found between the notes F and ♯ G in Forms 3rd and 8th; and also between C and ♯ D in the latter Form.

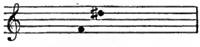




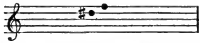
The interval called the augmented fifth is found between the notes C and ♯ G, in Forms 2nd and 3rd.



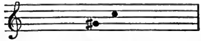
The augmented sixth is found between the notes F and ♯ D, in Form 8th.



The diminished third is found between the notes ♯ D and the octave F above, in Form 8th.

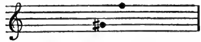


The diminished fourth is found between the note ♯ G and C, in Forms 6th, 7th, and 8th.



It can be also found in Forms 2nd and 3rd, between ♯ G and the octave C above.

The diminished seventh is found between the notes ♯ G and the octave F above, in Forms 3rd and 6th.

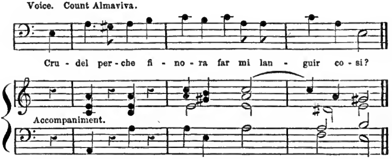


21. If, in the course of a musical composition, any sound has been either elevated or depressed a minor semitone, and this elevation or depression has been denoted by a ♯ or a ♭

placed before the representative note ; and if it is afterwards found necessary to restore the former sound, it is represented by its proper note with this sign, ♮, called a *Natural*, placed before it.

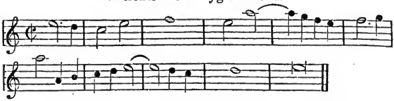
22. Hence the three signs, ♯, ♭, and ♮, sharp, flat, and natural, are signs of elevation, depression, and restoration of musical sounds.

Mozart has employed the eighth form of the minor scale in the duett "Crudel perchè finora," to express the Count's tenderness in his expostulation.

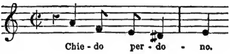


The notes of which this consists, melody and accompaniment taken together, are E, F, ♯G, A, B, C, ♯D, E, and since its final chord is major, it may be considered as the dominant chord of any one of the 2nd, 3rd, and 4th forms of the minor scale.

Melody in the fifth form of the minor scale, called by the ancients the Phrygian mode.



Melodic Phrase in the 8th form of the minor scale.

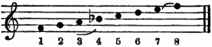


CHAP. V.

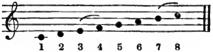
ON RELATIVE SCALES.

1. It has been already noticed in Chap. IV. that the notes of the first form of the minor scale are identical with those of the model major scale. By reverting to the construction of the major scales on F and G, in Chap. III. we find that the first four degrees of the scale on G are identical with the last four of the model scale on C; and that the first four of this latter scale are identical with the last (or upper) four notes of the scale in F, which may be shown at once in notes.

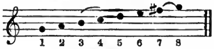
Major Scale on F.



Major Scale on C.



Major Scale on G.



2. Moreover, we see that these two scales, F and G, differ from the scale C in one note only, the scale F by having ♭B, and the scale G by having ♯F. Hence the scale C is considered as being *nearly related* to both of them.

3. Now as the scale G commences with the fifth degree, and the scale F with the fourth, we say that the two relative scales to C, the model major scale, are the scale of the fifth, and the scale of the fourth.

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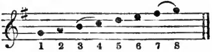
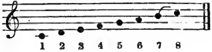
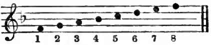
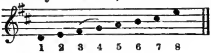
4. In like manner every major scale has two relative scales, viz., one constructed on its fourth degree, and one on its fifth. It must be observed that it rarely occurs that a major scale is constructed on ♯ G, the fifth degree of the scale ♯ C ; or on ♭ F, the fourth degree of the scale ♭ C ; for the former of these scales requires × F, and the latter ♭♭ B,* two notes which occur generally in minor scales. This will be seen by inspecting the following

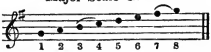
Table of Relative Scales.

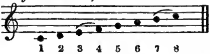

Major Scale G, the fifth of C.


Major Scale C.


Major Scale F, the fourth of C.


Major Scale D, the fifth of G.


Major Scale G.


Major Scale C, the fourth of G.

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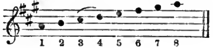
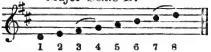
* That is, doubly sharped F, and doubly flatted B.

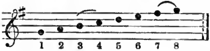
Major Scale A, the fifth of D



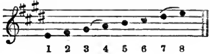
Major Scale D.



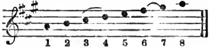
Major Scale G, the fourth of D.



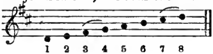
Major Scale E, the fifth of A.



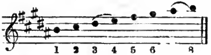
Major Scale A.



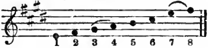
Major Scale D, the fourth of A.



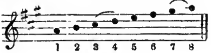
Major Scale B, the fifth of E.



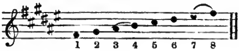
Major Scale E.



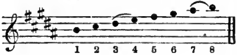
Major Scale A, the fourth of E.



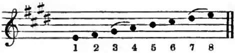
Major Scale ♯ F, the fifth of B.



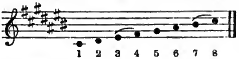
Major Scale B.



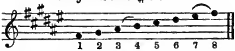
Major Scale E, the fourth of B.



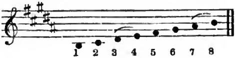
Major Scale ♯ C, the fifth of ♯ F.



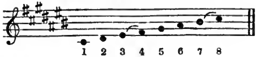
Major Scale ♯ F.



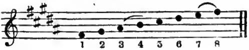
Major Scale B, the fourth of ♯ F.



Major Scale ♯ C.

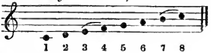


Major Scale ♯ F, the fourth of ♯ C.

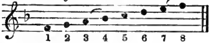


Similarly—

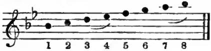
Major Scale C, the fifth of F.



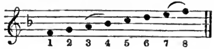
Major Scale F.



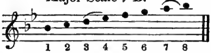
Major Scale ♭ B, the fourth of F.



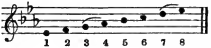
Major Scale F, the fifth of ♭ B.



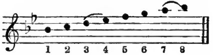
Major Scale ♭ B.



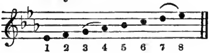
Major Scale ♭ E, the fourth of ♭ B.



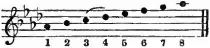
Major Scale ♭ B, the fifth of ♭ E.



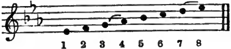
Major Scale ♭ E.



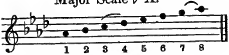
Major Scale ♭ A, the fourth of ♭ E.



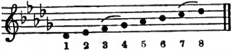
Major Scale ♭ E, the fifth of ♭ A.



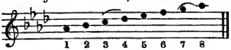
Major Scale ♭ A.



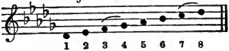
Major Scale ♭ D, the fourth of ♭ A.



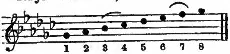
Major Scale ♭ A, the fifth of ♭ D.



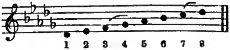
Major Scale ♭ D.



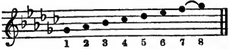
Major Scale ♭ G, the fourth of ♭ D.



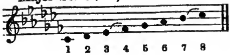
Major Scale ♭ D, the fifth of ♭ G.



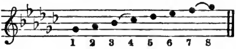
Major Scale ♭ G.



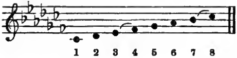
Major Scale ♭ C, the fourth of ♭ G.



Major Scale ♭ G the fifth of ♭ C.



Major Scale ♭ C.



5. In precisely the same manner can relative minor scales be tabulated, by taking the model scale of each form, and comparing it with scales constructed similar to itself, on its fourth and fifth degrees.

6. We soon become familiar with a composition written in one and the same scale, whether that scale be major or of the first four forms of the minor scale. But the ear is impressed with a monotony, as it were, by the scale always remaining at the same pitch, and it is relieved from this monotonous effect by transposing the scale to some other pitch, either higher or lower. For this purpose the most simple transitions are from the scale we have commenced in, into one of its relative scales, or into that minor scale which commences with the sixth degree of the major scale employed.

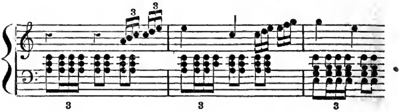
7. Hence there is not only a series of major or minor scales, related to each other, but there are also minor scales related to major scales, and *vice versâ.*

8. The minor scale nearest related to a major scale is that which commences on the sixth degree, and has all its notes in common with the major scale. Thus the minor scale commencing with A, of the 1st Form, is the nearest related to the major model scale C.

9. But each of the other forms commencing with A, are also called relative minor scales to the major scale C, inasmuch as they also commence on its sixth degree; but they are not so *nearly* related as the 1st Form, because they have one or more notes which do not belong to the major scale.

10. A transition from one position of a scale to another is made, without announcement of the position by means of the dominant harmony, or in other words, a relative scale may be introduced without modulation, as may be seen in the following example.

C. M. v. Weber.



Here there is no announcement of the minor scale on E, for there is no ♯F previous to the chord on E. (See Chap. XIII. on Modulation.)

CHAP. VI.

ON THE DURATION OF MUSICAL SOUNDS, OR MUSICAL RHYTHM.

1. Hitherto the notes have been employed only as representatives of the various musical sounds, with reference to their pitch and distances from each other ; but each note serves also to represent the *relative duration* of the sound which it represents. Thus, if we wish to denote merely the sound, any note whatever may be employed; but if, at the same time, we would signify for how long a time the sound is to be continued, we must use that particular note which represents this length of sound. Hence every note performs a double function—it denotes the sound itself and its duration.

2. Here then we have to do with time and any portion

thereof, a second, or any part of a second, may be assumed as the unit by which all the notes are to be measured. Moreover, we may choose any one of the notes we please to be the representative of this unit of time, and measure all the other notes by it.

3. Assuming the crotchet, ♩, for the unit of admeasurement, whatever duration we may give to this note, the minim must be twice as long in duration, the semibreve four times, and the breve eight times as long, or we may express the same thing thus :—

The duration of a breve equals that of eight crotchets.
,, semibreve ,, four ,,
,, minim ,, two ,,

4. Again, the crotchet being the unit of time, the quaver must be one half the duration of the crotchet, the semiquaver (or half quaver) must be one fourth, the demisemiquaver (or quarter quaver) one eighth of the duration thereof.

5. Hence we obtain the following—

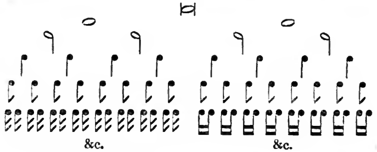
Table of the Relative Durations of the Notes.

A breve .	𝅜	is continued as long as	8	crotchets.
semibreve .	𝅝	,,	4	,,
minim . .	𝅗𝅥	,,	2	,,
crotchet .	♩	,,	1	,,
quaver . .	♪	one-half the duration of a crotchet.		
semiquaver .	𝅘𝅥𝅯	one-fourth	,,	
demisemiquaver	𝅘𝅥𝅰	one-eighth	,,	

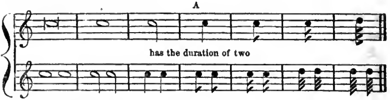
6. From whence we can easily perceive that a crotchet is as long as two quavers, or four semiquavers, or eight demisemiquavers ; also, a quaver is as long as two semiquavers, or four demisemiquavers ; and also, that a semibreve is as long as two minims, and the breve as long as two semibreves or four minims.

So that every note is either the double, quadruple, or some other multiple ; or else it is the half, fourth, eighth, &c., of some other note.

7. This may be exhibited in a diagram in the following manner.

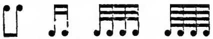


Or on the staves, thus :—



8. The stems may be turned upward or downward, for the sake of appearance or convenience, but no alteration in the note takes place in consequence.

The quavers, semiquavers, demisemiquavers, &c., may be written in groups, by joining the stems, thus :—



9. This doubling, quadrupling, &c., halving, quartering, &c., of the notes, is called *duple time.*

10. The breve 𝅜 rarely occurs except in music for cathedrals and other places of divine worship, or in music of a serious character, in which the notes used in general are the breve, semibreve, minim, and (more seldom) the crotchet.

11. The meaning of the notes with respect to time is therefore this : if two voices or instruments are employed to produce

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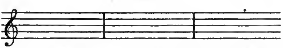
two sounds whose representatives are a 𝅗𝅥 and a ♩, or a ♩ and a ♪, or a ♪ and a 𝅘𝅥𝅯, or a 𝅝 and a 𝅗𝅥, and so on, the voice or instrument performing the longer note must hold it on twice as long as the other voice or instrument holds on the shorter, and similarly for every other proportionate duration.

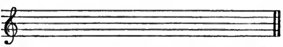
12. Six different notes may appear in the course of a musical composition, and may be combined or permuted in a great number of ways. Moreover, there must be given to some sounds more emphasis than to others, for the sake of expression; hence it becomes necessary to mark the emphatic note. This is done by dividing the time of the whole composition into equal portions, and denoting each portion by a straight line drawn perpendicularly across the staff. Lines thus drawn are called—

Bars.



And the end of a composition is denoted by two such lines, called—

A Double Bar.

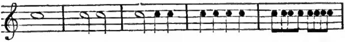


13. The portions of time contained between the bars are called *measures.*

A measure may consist of any quantity of notes, but the whole must neither exceed nor fall short of the exact portions assigned to the measure. Thus, if the portion of time be such as is represented by a semibreve, then the measure must contain such notes as make up together the value of a semibreve; and similarly if the measure contains the value of a minim, the notes in each measure must be such as, taken together, make a minim.

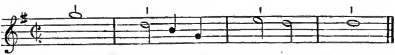
14. Hence, when the portion of time assigned to the measure equals a semibreve, the measure may be divided into two, four, or eight equal parts, each part containing a minim, crotchet, or quaver duration respectively; and each of these parts of the

measure may be divided into two, four, or eight parts, by notes which represent those parts; so that a measure may contain one 𝅝, or two 𝅗𝅥, or four ♩, or eight ♪, &c., &c.; or it may consist of any compound of those notes which make up the value of the semibreve.


&c.

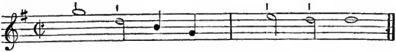
15. Hence we see minims must be produced twice as fast as semibreves, crotchets twice as fast as minims, quavers twice as fast as crotchets, and so on; the minims being equal to each other, the crotchets to each other, and the same with every species of note.

16. When the measure is divided into two equal portions, and there is only *one* accented note, viz. that at the commencement of the measure, this species of "time" is denoted by this character 𝄵, placed at the commencement of the composition, immediately after the signature (if any) of the scale.



With this mark at the beginning, the duration of a minim is *about* one second of time, which makes the duration of the semibreve about two seconds, and of the crotchet about half a second.

17. In general this mark denotes the duration of two semibreves (i. e. one breve) in each measure. The above musical phrase is, in this case, written thus :—



By this method there are two accented parts of the measure, viz. on the first and third divisions.

18. In music of a somewhat lighter character, the measure is divided into four crotchets, which is denoted by this mark 𝄴.

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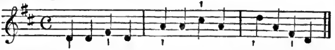
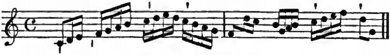
which is similar to the mark ₵, but without the vertical line drawn through it.

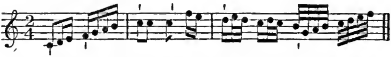


The accented parts being the first and third divisions of the measure. If the motion of the music be moderately slow, the time of each crotchet will be about one second.

19. In music of a cheerful character the measures are divided into eight quavers, and the accent is placed on the first, third, fifth, and seventh divisions; in this species of measure the notes will principally consist of semiquavers.



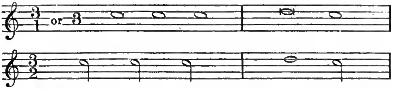
20. But if the composition contains numerous demisemiquavers as well as semiquavers, &c., it is better to divide it into measures containing only two crotchets or their equivalents. This species of measure is denoted by the figures $\frac{2}{4}$ or $\frac{2}{4}$; signifying two-fourths of a semibreve, i. e. two crotchets, are contained in each measure.



21. Hence we have four species of duple time, viz. one in which the measure is divided into four minims, denoted by the character ₵, and sometimes by the figure 2; another in which the measure is divided into four crotchets, denoted by the character C, and also by the figures $\frac{4}{4}$, signifying four-fourths of a semibreve, i. e. four crotchets; a third, in which the measure is divided into eight quavers, and having four accented parts, denoted also by the character C, or the figures $\frac{4}{4}$; and a fourth species, in which the measure is divided into two crotchets, denoted by $\frac{2}{4}$

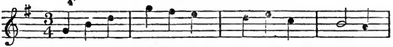
22. When the figure 2, or $\frac{2}{1}$, is placed at the beginning, the semibreve is considered the unit of time, and all the other notes are measured by it. When the time is denoted by C, or $\frac{4}{4}$, the crotchet is the unit; and when it is denoted by $\frac{2}{4}$, the quaver is the unit (especially in vocal music), if the movement be not very quick.

23. The measures are sometimes divided into an odd number of parts, and most generally and usefully into three, so that it will contain three semibreves, or three minims, or three crotchets, or three quavers, or three semiquavers. These different species of "time" are denoted by the figures 3 or $\frac{3}{1}$, $\frac{3}{2}$, $\frac{3}{4}$, $\frac{3}{8}$, $\frac{3}{16}$, respectively, thus :—

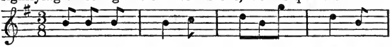


These species of measure belong to sacred music, or to music of a very grave character.

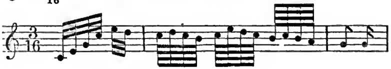
24. Music of a more gentle and graceful character is usually written in $\frac{3}{4}$, or three crotchet time.



25. Music of a light and cheerful character is divided into measures containing three quavers, denoted by the figures $\frac{3}{8}$, signifying three-eighths of a semibreve, i. e the quavers.



26. And if the notes in the measures are very short and rapid, the measure is divided into three semiquavers, denoted by the figures $\frac{3}{16}$, i. e. three-sixteenths of a semibreve.



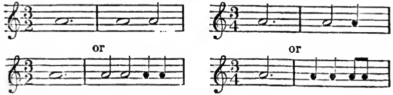
27. All these species of division by three come under the denomination of *triple time*, and there is only one accented portion of the measure, viz. the first. So that when the time is marked $\frac{3}{2}$, the accent is on the first minim; when it is denoted by $\frac{3}{4}$, the accent is on the first crotchet; in like manner, the accent is on the first quaver, or first semiquaver, when the time is denoted by $\frac{3}{8}$, or $\frac{3}{16}$, respectively.

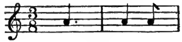
28. When there is but one note in a measure, and the sound which it represents is to be continued through the whole measure in triple time, composers denote this duration by placing a round dot or point immediately *after* the note, thus: 𝅗𝅥. ♩. ♪. 𝅘𝅥𝅯. Thus a minim with a dot equals a minim and a crotchet, or three crotchets; a crotchet with a dot equals a crotchet and a quaver, or three quavers; a quaver and a dot equals a quaver and a semiquaver, or three semiquavers; a semiquaver and a dot equals a semiquaver and a demisemiquaver, or three demisemiquavers, in duration. So also in slow music, a semibreve and a dot 𝅝. represents a sound equal in duration to a semibreve and a minim, or three minims.

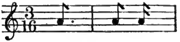
29. This may be made more clear in a tabular form.

A breve and a dot		𝅜·	=	the duration of 3 semibreves.
semibreve	„	𝅝·	„	3 minims.
minim	„	𝅗𝅥.	„	3 crotchets.
crotchet	„	♩.	„	3 quavers.
quaver	„	♪.	„	3 semiquavers.
semiquaver	„	𝅘𝅥𝅯.	„	3 demisemiquavers.

Examples of Triple Time.

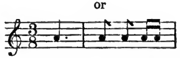


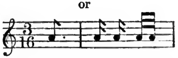




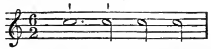
or

or



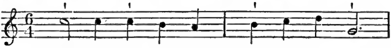


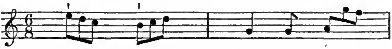
30. In some compositions the measures contain double the above quantities of triple time. Thus a measure containing two measures of $\frac{3}{2}$ time is denoted by $\frac{6}{2}$.



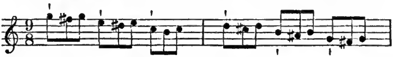
The accent being on the first of every three minims, i. e. on the first and fourth. This species belongs to music of former days.

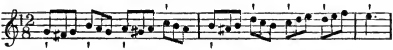
31. In like manner, a measure containing two measures of $\frac{3}{4}$ time is denoted by $\frac{6}{4}$; if it contains two measures of $\frac{3}{8}$, by $\frac{6}{8}$.





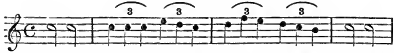
The measure may also contain three or four triplets; that is, there may be nine quavers, or twelve quavers, in a measure.





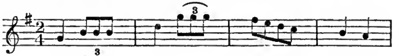
It is evident, in the first of these examples, the measures contain three measures of $\frac{3}{8}$ time, and in the latter they contain four thereof.

32. This species of triple time sometimes occurs in the course of composition written generally in duple time:



and the triplets are introduced accidentally, as it were; they are marked by a curve line drawn over the triplet, together with the figure 3, as in this example.

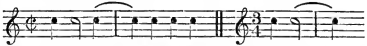
33. It will sometimes also happen, that one half of a measure is in duple time, and the other half in triple time.



In this case the crotchets, in the second portions of the first two measures, are said to be unevenly divided, as is also the minim value in the second and third measures of the example in § 32.

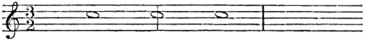
35. Hence we see that every note may be divided in two ways, viz., evenly, in two parts; and unevenly, into three.

36. It very often happens that a sound commenced in one measure is continued into the next following measure; this is denoted by writing its representative note in both measures, and joining them by a curve line drawn over or under the heads of the notes, thus—

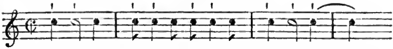


This curve line is called a Ligament, or Bind.

37. In three-minim time the note in the third portion of one measure and first portion of the adjoining measure is sometimes written as a semibreve, and the bar is drawn through it, cutting it, as it were, in half, thus—

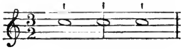


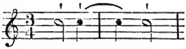
38. This seems to have occasioned the use of the word Syncopation, which means, in musical language, cutting in two parts. Hence every note which occupies the second and third, or fourth and fifth, or sixth and seventh divisions of a measure, is said to be syncopated, i. e., cut in two.



Thus a syncopated note, *if accented at all*, causes the accent to fall on the second, or fourth, or sixth, or eighth portion of the measure, instead of the first, or third, or fifth, or eighth. But if there be no accent, the word syncopation signifies cutting off the accent.

39. When syncopation occurs in music written in triple time, the effect is sometimes the same as if it were in duple time, as in the next example.





40. In former times, when music was less hurried and exciting, and the length of each note was regulated by the quantity of the syllable to which the note was applied, there was no occasion for this division into measures; a note was accented only with the accented syllable, and emphasis depended on the emphatic word, and not on the particular position of the note, for it had none.

41. But as instrumental music became more and more important, and passages of greater rapidity of execution became more frequent, it was uncertain on what notes an emphasis should be laid, and hence the use of bars at first was merely to mark the place of strong emphasis, and thus give as much expression to purely instrumental music as was given to vocal music by means of the words alone. And

42. Although there may be more than one accent in a measure, each of these is not equally emphatic; indeed, in some measures not one of the accented notes is emphatic.

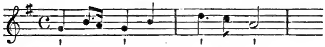
43. The emphasis usually, though not necessarily, occurs on the first portion of a measure, and is the strongest marked part of a phrase, rather than of a measure.

44. A musical phrase is similar to a phrase in speech, in

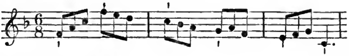
which there may be several accents but only one emphasis, which will be on the accented part of the principal, or most emphatic word.

45. There is an abundance of music in which a whole phrase is contained in one measure, but in general a musical phrase consists of two measures.

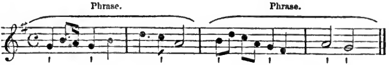
Musical phrase of two measures.



Some phrases consist of three measures, as,



46. Hence we see a group of two or more measures forms a phrase. In like manner a group of two or more phrases form a period.



NOTE.—The end of a period is denoted by a double bar.

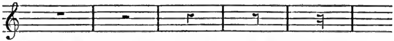
47. At the end of one period, and before the commencement of another, there is very often a breaking off, or discontinuance of the sound for a portion of a measure. But the *time* is not interrupted ; there is merely a delay before the sounds themselves are recommenced.

48. When there is a cessation of sound, there is of course no note in that part of the measure where the cessation takes place. But as the time proceeds just the same as if there were no cessation of sounds, the vacant portion of the measure is denoted by another kind of mark, which shows what species of note is absent, and whose place it supplies.

49. This new mark is called a rest, inasmuch as the voice

or instrument, by whose agency the sounds are produced, is, as it were, at rest for the time denoted by the rest.

50. We have hence as many different sorts of rests as there are notes, and each rest is called after the name of the note whose place it occupies. Thus we have a semibreve rest, minim rest, crotchet rest, &c., &c., the forms of which are best shown by writing them on a staff.

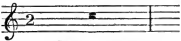


51. The semibreve and minim rests are similar in shape, and they are distinguished by *position* on the staff; the semibreve rest occupying the upper half space, and the minim rest the lower half space. The crotchet rest consists of a perpendicular shank or stem, and a thick horizontal stroke joined thereto, which is drawn from the stem *toward the right hand.*

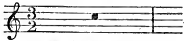
The quaver rest is similar to the crotchet, but the horizontal part is drawn *toward the left hand.*

The semiquaver rest has two horizontal strokes drawn towards the left hand, and a demisemiquaver has three similar strokes, 𝄿, and the number of these strokes is increased for the rest of next shorter duration, if required.

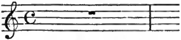
52. The semibreve rest is always used to denote a rest during a whole measure, in *all cases* in which the measure does not contain more than the value, or duration of the semibreve note. But when the measure contains three minims or two semibreves, a rest of one whole measure is denoted by a breve rest, which is a character like the semibreve and minim rests, but it occupies the *whole* space of the staff in which it is placed.



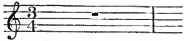
Rest of one measure.



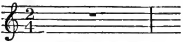
Rest of one measure.



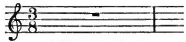
Rest of one measure.



Rest of one measure.

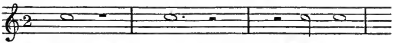


Rest of one measure.

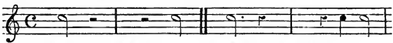


Rest of one measure.

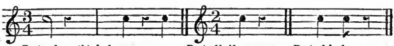
53. If there is a rest during only a part of a measure, we must use that character which denotes this part.



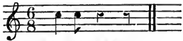
Rest of half a measure. Rests of a quarter of a measure.



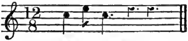
Rests of half a measure. Rests of a quarter of a measure.



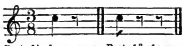
Rests of one-third of a measure. Rest of half a measure. Rest of ¼ of a measure.



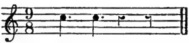
Rest of half a measure.



Rest of half a measure.



Rest of ⅓ of a measure. Rest of ⅔ of a measure.



Rest of one-third of a measure.

And the like for any other portion of a measure in any species of "time."

DIVISION III.

CHAP. I.

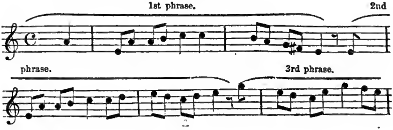
ON THE CONNECTION OF MUSICAL SOUNDS IN THE FORMATION OF MELODIES.

1. A MUSICAL composition may consist of a succession of single sounds, and if this succession has a musical sense, it is called a melody.

2. A melody consists of two parts; viz. the particular succession of sounds, and their rhythmical arrangement.

3. The sounds themselves always belong to the major scale, or to some one of the forms of the minor scale; or, very often, to a mixture of these forms; i. e., a musical composition may be written wholly in a major scale, of which there is now but one model; or it may be written so as to comprehend ***several*** of the forms of the minor scale, and we rarely meet with a piece entirely in any one form of this scale. The melody of the national song "God save the Queen," for example, is written throughout in the major scale; so also in the national song, "Rule Britannia."

But the following well known melody—



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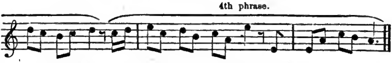
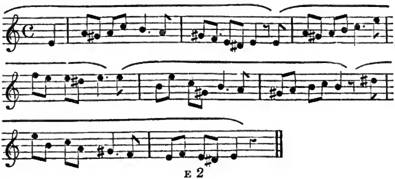


is written in several scales. For the first phrase belongs to the fourth form of the minor scale, viz. that with a major sixth and a minor seventh ; the second phrase belongs to the fifth form thereof ; the third phrase belongs to the major scale, and the fourth to the first form of the minor scale.

4. The movement of a melody from one sound to the next in succession is called a melodic step ; and a melody is more pleasing according as the steps proceed more easily, i. e., according as the melody is formed by the more simple and easy degrees, and not by large skips from sound to sound.

5. The most simple degrees are contained within the range of the scale, be it major or any form of the minor, except those which have intervals greater than a tone between two consecutive sounds.

6. Thus the step of a second, whether minor or major ; of a minor and major third, fourth, fifth, &c. (as contained within the major scale, and some of the forms of the minor scale most similar to it,) are more simple and easy than the augmented and diminished intervals contained in the other forms of the minor scale. The foregoing melody, for example, is smooth and easy in its progress, while the following, consisting of the degrees of the 8th form, is less natural and more difficult, although very elegant and artificial.



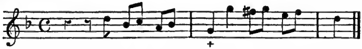
7. A melody generally consists of an even number of phrases; this number may be four, as in the above two melodies, or eight, twelve, sixteen, &c. &c.

8. A musical phrase generally corresponds with a line in a verse of poetry, whilst a measure corresponds with one or two feet thereof. The two melodies above given are constructed so as to contain two feet in each measure, or four in each phrase; hence they are adapted for lines of eight syllables in Iambic measure.

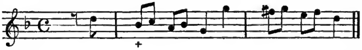
9. A musical phrase may commence either in the accented or unaccented portion of a measure, according as the first note thereof is accented or not. The accented note must always occur in the accented part of the measure, and the strongest accent should be always at the beginning of the first measure of the phrase.

10. Hence, if there are two accented places in a measure, and the second accent of the phrase is the most emphatic, the first should be in the second portion of the first measure, and thereby cause the emphasis to fall on the first portion of the second measure; thus the following musical phrase may be written in two ways.

1st.



2nd.



In the first, the emphasis is on the note G, in the first portion of the second measure; in the second, it is on ♭B, the first quaver at the commencement of the first measure. Hence—

11. Attention is required not only to accent, but also to emphasis, and to the latter most especially. This it is which causes so many compositions to commence with a portion of a measure only, and not with a complete one.

12. The first measure is complete only when the first note of the composition is the most emphatic in the phrase; thus, for example:—

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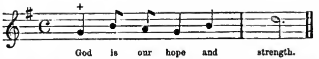
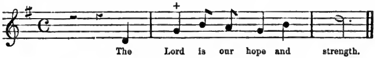
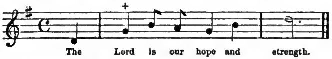


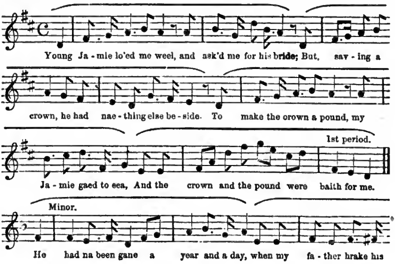
The emphasis is on the word "God," and hence the phrase commences at the very beginning of the measure. Whereas, had the words, "The Lord," been used for the word "God," the phrase would commence in the fourth portion of the measure, thus :—

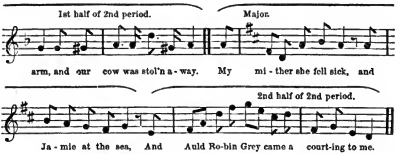


Or, without the rests in the first measure, thus :—



13. Melodies for ballads, songs, &c., &c., may extend over one or more verses thereof; and hence they may consist of more than one period. And, moreover, one period may be written in one kind of scale, another in another kind, or a mixture of kinds. The ballad, "Auld Robin Grey," for example, consists of two periods.


Young Ja - mie lo'ed me weel, and ask'd me for his bride; But, sav - ing a
crown, he had nae - thing else be - side. To make the crown a pound, my
1st period.
Ja - mie gaed to sea, And the crown and the pound were baith for me.
Minor.
He had na been gane a year and a day, when my fa - ther brake his


1st half of 2nd period.
Major.
arm, and our cow was stol'n a - way. My mi - ther she fell sick, and
2nd half of 2nd period.
Ja - mie at the sea, And Auld Ro-bin Grey came a court-ing to me.

The first period, consisting of four phrases of two measures each, is entirely in the major scale on D. The first half of the second period commences in the minor scale of the first form seated on D; and the second phrase thereof ends in the minor scale of the eighth form. The second half of the period is the same as that of the first period, viz. in the major scale.

14. These changes of scale afford a pleasing and useful variety of melody, and also of musical expression of the words to which it is adapted.

15. When we would compose a melody of any kind, and the necessary musical idea has arisen in the mind, the first thing we have to consider is whether this can be written in the major scale, or in which form, or which mixture of forms, of the minor scale it must be written.

16. This determined, we have next to decide on the rhythm. The composer can, of course, determine the accent and emphasis, and he may choose, at pleasure, any species of time, duple or triple, that best suits his purpose.

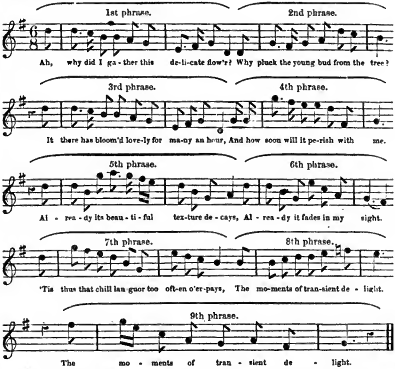
17. Moreover, as we have seen, the composition may commence in any portion of a measure, and with *any* note of the scale. If the music be set to words, the accentuation and place of emphasis should be regulated entirely by them.

18. Again. It depends upon the function of the voice as to which staff we should employ to write the notes upon. For if the music be intended for a treble voice, it should be written on the treble staff; if for a soprano or second treble, or contralto, then the mezzo-soprano staff should be used, so that a lady may

see at once whether the piece is such as suits her own voice. In like manner, the tenor staff should be used for all song-music intended to be sung by a high male voice; and the bass staff for all that is intended for a bass voice.

These points should be particularly observed, in order to prevent the many incongruities which constantly occur from their neglect.

19. It has been said that a melody generally consists of an even number of phrases. This is not always the case, as will be seen by the following ballad melody, which consists of nine phrases.


1st phrase.
2nd phrase.
Ah, why did I ga - ther this de-li-cate flow'r? Why pluck the young bud from the tree?
3rd phrase.
4th phrase.
It there has bloom'd love-ly for ma-ny an hour, And how soon will it pe-rish with me.
5th phrase.
6th phrase.
Al - rea - dy its beau - ti - ful tex-ture de - cays, Al - rea - dy it fades in my sight.
7th phrase.
8th phrase.
'Tis thus that chill lan-guor too oft-en o'er-pays, The mo-ments of tran-sient de - light.
9th phrase.
The mo - ments of tran - sient de - light.

The ninth phrase causes the eighth line of the song to be repeated.

20. It would be useless to embarrass the student with many rules for composing a melody, for in most cases it must depend

upon the inventor. And any one acquainted with the scales and rhythm, as hereinbefore explained, will be in possession of the means of writing in musical language; it will be only necessary to perfect the design in the mind before committing it to paper.

21. We may observe, however, that a melody need not be written so as to have the *same pitch note* at the termination of every period. But a period may commence in one scale, and terminate in a scale related to it. But the termination of the final period is generally in the same scale in which the music commences.

22. But if a period commence in a major scale, and end in a minor, or *vice versâ*, these scales should be seated on one and the same note. See the example in § 13.

CHAP. II.

ON THE COMBINATIONS OF MUSICAL SOUNDS, OR HARMONY.

1. A MUSICAL composition may consist of a series or progression of sounds, so connected that several of them may be heard at the same instant.

2. When several voices or instruments produce, at the same instant, musical sounds which are different from each other, yet so combined as to cause agreeable sensations on the ear, this combination is called harmonious; and the proper method of combining the sounds, so as to produce this agreeable sensation, is called the Doctrine of Harmony.

3. In the formation of a piece of music in harmony, the series of sounds assigned to the highest voices or instruments is called the *upper part;* that which is assigned to the lowest voices or instruments is called the *bass* or *lower part;* while those series which are assigned to the middle voices or instruments are called the *middle parts.*

4. There are as many parts as there are voices or instruments.

differing from each other in their peculiar functions. But in general, the whole harmony, or series of combinations of sounds, can be exhibited in four *parts*, viz. the *bass*, *tenor*, *alto*, and *treble*.

5. The treble part of a musical composition, properly speaking, can be performed only by such instruments as the octave flute, violin, the upper strings of a piano-forte or harp, the small pipes of an organ, &c.

6. Although we are apt to call every female's or boy's voice, *treble*, yet it is only some few female voices that can produce the very high tones of the treble part, and there are but few boys' voices that can produce them.

7. Composers of music "in parts," therefore, call the upper voice the "*Soprano;*" the next lower female or boys' voice, the "*Mezzo Soprano;*" and the lowest species of these voices they call "*Contra Alto.*"

8. Again, the highest adult male voice is called the "*Alto,*" or "*Contra Tenor;*" the next lower voice, the "*Tenor;*" and the lowest of all—although it need not necessarily be *very low* or deep—is called the "*Bass*" voice.

9. Hence there are six species of voices in a vocal composition written in harmony, viz.:—

The Soprano, or highest female or boy's voice.
Mezzo Soprano, or second Soprano.
Contra Alto, or lowest Soprano.
Alto, or Contra Tenor, highest adult male voice.
Tenor, or middle adult male voice.
Bass, or lowest male voice.

10. Although there are six species of voice, it does not follow that each voice, when all are singing at the same instant, performs a sound differing *in name* from all the rest; some of the tones may be in octaves or unisons with some other tones.

11. Moreover, in music written for many voices or parts, some of the parts will frequently be silent, while the whole harmony is performed by the remaining parts; and when the

whole body of voices or instruments, performing the different parts are heard together, some of them are "doubling," or strengthening others, by performing in unisons, or octaves, with them.

12. With respect to the *movement of the voices*, or parts, in a harmonized composition, some of them may ascend, while others descend, or remain stationary.

13. When two or more parts move in the *same* direction, the motion is said to be *parallel*, or *direct.*

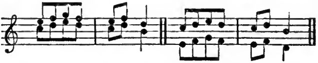
14. And when two or more parts move in opposite direction, the motion is said to be *contrary.*

15. Thus two or more parts may approach or recede from each other, but it rarely happens that all the parts can move the same way, upwards or downwards, together

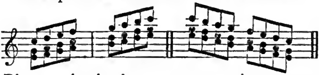
16. When some, one or more, of the parts are stationary, i. e. either hold on a tone, or reiterate it, while the remainder are moving upward or downward, this species of motion is called *oblique.*

17. Parallel motion is when two or more voices move in the same direction, and remain at the same number of degrees distant throughout the movement.

Example of Parallel Motion in Thirds and Sixths.

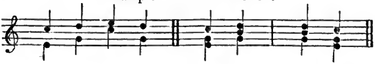


Example of Parallel Motion in Three Parts.



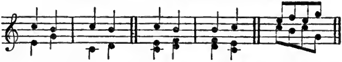
18. Direct motion is when two or more voices or parts move in the *same direction*, but do not remain at the same distance from each other throughout the movement.

Example of Direct Motion.



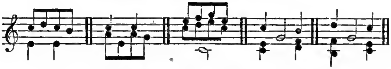
19. In contrary motion, the voices or parts may either approach or recede from each other.

Examples of Contrary Motion of Parts.

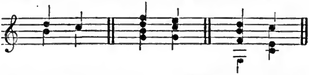


20. In oblique movement, either of the parts may be stationary, while the remainder move in parallel or contrary directions.

Examples of Oblique Motion.



21. It frequently happens, in the movement of the parts, that two of them will coincide and appear but as one part.



Yet if the parts are performed by instruments or voices, whose "tones" are different in quality, this difference will always preserve the distinction of the parts.

CHAP. III.

ON COMMON CHORDS.

1. There must be at least two musical sounds at the same time, in order to produce harmony; and when they are heard their effect will produce either agreeable or disagreeable sensations on the ear.

2. If the simultaneous production of two sounds causes an

agreeable sensation, we say they are *concordant*, or they form a *concord*. If, on the contrary, their effect be disagreeable, we call them *discordant*, or they form a *discord*.

3. Hence, two sounds heard simultaneously must be either discordant or concordant, or form a discord or a concord.

4. Any two sounds apart from each other, by the interval of a minor third, or a major third, a minor fourth, a perfect fifth, a minor sixth, a major sixth, or an octave or eighth, are concordant, when heard together; and at all other intervals they are discordant.

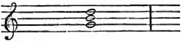
5. Concords are of two kinds, viz. perfect and imperfect. The perfect are the minor fourth, the perfect fifth, and the octave. The major third, minor third, major sixth and minor sixth, are imperfect concords.

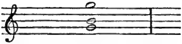
6. A perfect concord is so called, because the conterminate sounds thereof cannot be raised or depressed without becoming discordant.

7. But the imperfect concords are such that the major interval may be changed into the minor, and hence the minor and major thirds, and minor and major sixths, are called imperfect, because they admit of this change.

8. If three or more sounds are produced at the same instant, the combination is called a *chord*.

9. In order that there may be a chord, there should be three distinct sounds, but one of them may be at the distance of an eighth from one of the others.





10. When a chord is composed of concords only, it is called a *common chord*.

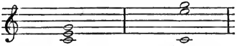
11. A *common chord* consists of a bass note, its major or minor third (or their octaves *above*), and its *perfect* fifth (or its octave *above*).

The *bass note* need not represent a *deep* sound; it merely denotes the *lowest of the three sounds*.

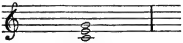
12. All chords can be represented on any staff, treble, intermediate, or bass; but when the notes require a wider separation, two staves are necessary.

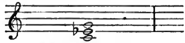
13. Any note may be taken as the *bass note* of a chord, and if the chord be composed as in § 11, with the third and fifth over the bass note, this note is called the *fundamental note*, or *root of the chord.*

14. Thus, if C be the bass note, and over it be placed E, its major third, and G, its perfect fifth, we have the common chord of C, in which C is the fundamental note, or root.



15. When the third to the fundamental note is *major*, the chord is called a *major chord;* and when the third is *minor*, the chord is called a *minor chord.* In other words, a chord is called major or minor according as the *third to the fundamental note* of the chord is major or minor.

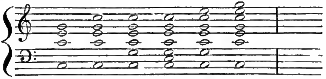

Major chord of C.


Minor chord of C.

16. The octave note to any one of the notes of a chord may be added to the chord, but it will still remain a common chord.

17. So also if the octaves of all the notes of the chord be added to it, it will still be a common chord.

18. In truth, a chord of any number of notes, which contains none but concordant intervals, or concords, is a common chord.

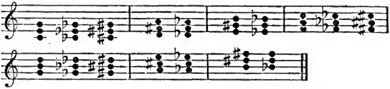


These are all one and the same chord, with one or more of the parts, or voices, *doubled.*

19. Since any note may be assumed as a fundamental note, and a common chord may be constructed thereon, we can have as many common chords as there are notes in the science of music. Moreover, each note may be the fundamental note of either a major or a minor common chord, consequently there is an equal number of major and minor common chords.

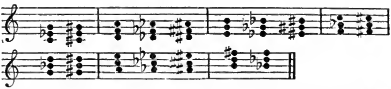
20. The following are the most useful

Major common Chords.



21. And the following are the most useful

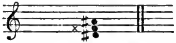
Minor common Chords.



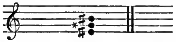
22. In the above examples there are seventeen major and seventeen minor common chords formed upon seventeen notes out of the twenty-one usually employed in music. But if we take the remaining four notes, and construct major chords upon them, we shall find it necessary to elevate a sharp note a minor semitone, i. e., to make it *doubly sharp*.

23. The four notes omitted in the example of major chords in § 20, are ♯D, ♯E, ♯A, and ♯B. Now it will be seen by inspecting the minor common chord constructed on ♯D, (in § 21,) that the third to the fundamental note is ♯F ; and as this is a minor third, it must be raised a *minor semitone* to make the interval a major third. The note which is a minor semitone above ♯F, is two minor semitones above the note F, and hence is called *double sharp* F. The character used to denote a twice elevated or doubly sharped note, is formed

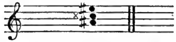
thus × ; and we get the major chord constructed on ♯ D, thus :



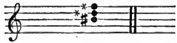
24. In like manner we obtain the major common chord constructed on ♯ E by means of double sharp G.



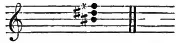
And also the major chord on ♯ A, by means of double sharp C :



And the major common chord on ♯ B requires both double sharp D and double sharp F, the latter being the perfect fifth to ♯ B :

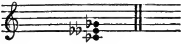


25. The four notes not employed as fundamental notes in the example of minor common chords in § 21, are ♭ C, ♭ F, ♭ G, and ♯ B. The minor common chord, constructed on ♯ B, requires double sharp F, which will be its perfect fifth.



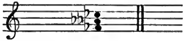
26. But if we take ♭ C for the fundamental note, we shall find, by inspecting the example of major common chords in § 20, that ♭ E makes with ♭ C a major third ; consequently ♭ E must be *depressed* a minor semitone, i. e. E itself must be doubly depressed, or doubly flatted, in order that the interval between the fundamental note ♭ C and its third, may be a minor third. A doubly flatted note has this character, ♭♭, which is simply two ♭'s, in contact, placed before it thus, ♭♭ E. And with this note we get the

Minor common chord on ♭ C.



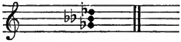
27. In like manner ♭♭ A forms a minor third with ♭ F, and ♭♭ B a minor third with ♭ G. With the first we obtain

The minor chord on ♭ F.



And with the second we get

The minor chord on ♭ G.



28. We have now constructed twenty-one major and twenty-one minor common chords, and we see how six new sounds, whose representatives are × F, × C, × G, ♭♭ B, ♭♭ E, and ♭♭ A, are introduced into the system of musical sounds.

29. These six extraordinary notes are never assumed as *fundamental* notes of chords.

30. We perceive by the construction of a common chord that it consists of the following concords, viz.:—

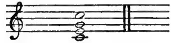
A major third,
minor third, and
perfect fifth.

31. In a major common chord, the major third is formed by the fundamental note and its third, and the minor third by the third and fifth.

In the minor common chord these intervals are reversed. Moreover we see these chords take their names, major and minor, from the names of their "thirds."

32. It has been already observed that the octave note to the fundamental may be added; indeed, octaves must be added when the composition is written in four distinct "parts."

33. By the addition of the octave to the fundamental note, the number of concords is doubled, as may be seen by this example:



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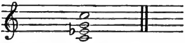
Here we have three perfect concords, viz. :—
an octave between C and C,
a perfect fifth „ C and G,
perfect fourth „ G and C, the octave note;
and three imperfect concords, viz.
a major third between (the fundamental) C and E,
minor third „ E and G,
minor sixth „ E and C the octave.

34. Similarly in the minor common chord—



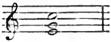
There are the same three perfect concords as in the major common chord, and there are three imperfect concords, viz.
a minor third between (the fundamental) C and ♭ E,
major third „ ♭ E and G,
major sixth „ ♭ E and C the 8th.

35. We also perceive that those imperfect concords which are major in the one species of common chord are minor in the other, and, *vice versa*, those which are minor in the one are major in the other. This change of imperfect concord produces a very decided difference in the characters of major and minor common chords.

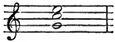
36. If the fundamental note be removed from the bass, or lowest part of the chord, and placed *above* either its third or its fifth, or, which is the same thing, if either the third or fifth to the fundamental be removed and placed *below* the fundamental note, the chord is said to be *inverted.*

37. Hence every common chord may be inverted two ways—one in which the third to the fundamental note is the bass or lowest note, and one in which the fifth to the fundamental is the bass or lowest note. For example, taking the common chord C major, we get

The first inversion.

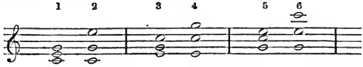


The second inversion.



The first inversion being formed by having the third in the bass or lowest part; and the second by having the fifth in the bass.

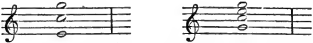
38. The three constituent notes of a common chord may be placed in six positions, i.e. there are six permutations of a common chord.



39. But the change of positions of the two *upper* notes at no time makes any alteration in the name of the chord; it is mere permutation, not inversion.

40. A common chord has more richness of harmony than either of its inversions, and the first inversion has more thereof than the second; this arises from the concord of the perfect fifth being wanted in the inversions. And moreover the perfect fourth, being the lowest concord in the *second* inversion, causes it to be more meagre than the first.

41. It is true, that by adding the octave note, and placing it somewhere in the middle of an inversion, we can have the concord of the perfect fifth:—



But as this concord has no connection with the bass note, the chord has, as it were, lost its foundation-harmony, and is less powerful than when the fundamental note is in the bass.

42. Moreover, those positions of the common chord, and its inversions, in which there are the greater number of major imperfect concords, are richer in effect than those in which are contained the greater number of minor.

43. In inversions of common chords, it is better to double the octave fundamental note, than either of the other notes, although these may sometimes require doubling in music of four parts.

CHAP. IV.

ON DISCORDS—CHORDS OF THE SEVENTH.

1. In Chap. III. are enumerated all the concordant intervals, otherwise called concords, viz. the minor and major thirds, the minor and major sixths, the perfect fifth, the perfect or minor fourth, and the octave.

2. The discordant intervals, or simple discords, are—

The minor and major semitones,
major fourth,
imperfect fifth,
minor seventh, and
major seventh,

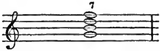
and all augmented or diminished intervals.

3. Common chords are the foundations of all other chords, and all chords which are not common chords, or inversions of these, contain one or more discords.

4. Those chords containing discords, which are founded on common chords, are called *fundamental discords.*

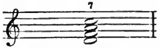
5. Of fundamental discords, those which are founded on major common chords are considered as the *principal discords.*

6. The *principal* fundamental discords are formed by adding a *minor third* to the major common chord. Thus, adding F to the chord of G :—



This minor third (F) is a minor seventh to (G) the fundamental note of the common chord.

7. Those fundamental discords which are founded on minor common chords are called *secondary discords.* These are formed by adding a minor third to a minor common chord.



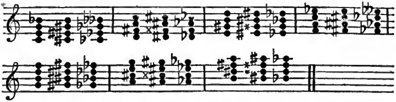
This minor third (C) added to the common chord, being also a minor seventh to the fundamental note of the common chord.

8. Hence we see that a fundamental discord, and the common chord on which it is constructed, have one and the same fundamental note.

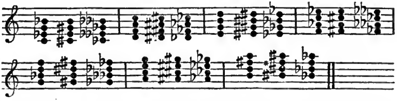
9. These fundamental discords are called *"chords of the seventh;"* and the principal fundamental discords, i. e. those constructed on the major common chords, are called *major chords of the seventh,* while the secondary discords, or those constructed on minor common chords, are called *minor chords of the seventh.*

10. It follows, from what has been said above, that there are as many "major chords of the seventh," as there are major common chords; and as many "minor chords of the seventh," as there are minor common chords, viz. :—

Twenty-one Major Chords of the Seventh.



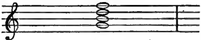
Twenty-one Minor Chords of the Seventh.



Those chords of the seventh which require double sharped, or double flatted notes in their construction, are of less frequent occurrence than the others, as is the case with the common chords from which they are derived.

11. If we take any one of the major chords of the seventh,

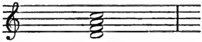
and analyze it, we shall find it to be composed of four concords and two discords. Thus the major chord of the seventh, constructed on the fundamental chord of G,



Contains a major third between G and B
minor third „ B „ D
minor third „ D „ F
perfect fifth „ G „ D
} four concords;

And a false or imperfect fifth between B and F
a minor seventh „ G „ F
} two discords.

12. But a minor (or secondary) chord of the seventh has five concords and but one discord in its composition. Thus, in the minor chord of the seventh, founded on the note D,



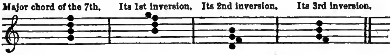
There is a minor third between D and F
major third „ F „ A
minor third „ A „ C
perfect fifth „ D „ A
perfect fifth „ F „ C
} five concords,

the discord being the minor seventh between D and C.

13. The secondary chords of the seventh are of a more severe and grave character than the major chords of the seventh, because of the two perfect fifths in their composition.

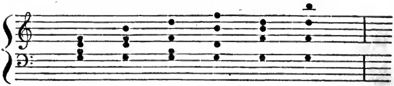
All chords with minor thirds are more plaintive in their character than those with major thirds to their fundamental notes.

14. Every chord of the seventh can be thrice inverted, viz.:
with the third to the fundamental note in the bass,
fifth „ „
seventh „ „

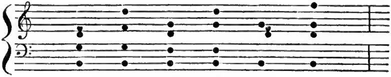


15. There are in all twenty-four permutations of this chord and its inversions, viz.:—

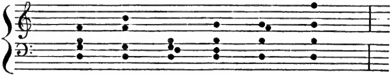
Six with the fundamental note in the bass.



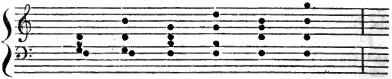
Six in the first inversion.



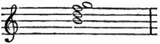
Six in the second inversion.



And six in the third inversion.



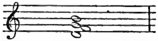
16. In each of the three inversions of the major chord of the seventh, there are four concords and two discords. In the first inversion—



There is a minor third between B and D
minor third „ D and F
minor sixth „ B and G
perfect fourth „ D and G } four concords.

The discords are a major second between F and G, and
an imperfect fifth „ B and F.

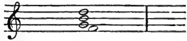
In the second inversion—



There is a minor third between D and F
perfect fourth „ D and G
major sixth „ D and B
major third „ G and B
} four concords;

the two discords being
a major second between F and G,
major fourth „ F and B.

In the third inversion

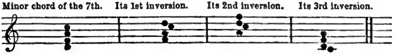


the four concords are
a major third between G and B,
minor third „ B and D,
perfect fifth „ G and D,
major sixth „ F and D;

the two discords being a major second between F and G, and a perfect fourth between F and B.

Of these three inversions the second is the most meagre and ineffective, on account of the perfect fourth between the bass note and the octave to the fundamental note of the chord. The first and third inversions are very effective, but no inversion is so much so as the chord itself. The superior grandeur of the chord arises from its having the perfect fifth between the bass note and its fifth: all chords are grandest when the fundamental note is in the bass.

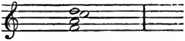
17. The three inversions of the minor chord are as follow; assuming that constructed on D.



Minor chord of the 7th. Its 1st inversion. Its 2nd inversion. Its 3rd inversion.

In each of these inversions there are five concords and but one discord.

In the first inversion—

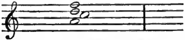


The five concords are

a major third between F and A,
perfect fifth " F and C,
perfect fourth " A and D,
major sixth " F and D,
minor third " A and C;

the discord being a major second between C and D.

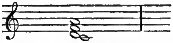
In the second inversion—



we find a minor third between A and C
perfect fourth " A and D
perfect fourth " C and F } five concords;
minor third " D and F
minor sixth " A and F

the discord being as before, a major second between C and D.

In the third inversion—



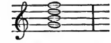
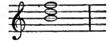
There is a minor third between D and F
major third " F and A
perfect fifth " D and A } five concords;
perfect fourth " C and F
major sixth " C and A

the discord being a major second between C and D, as before.

18. Of the three inversions of the minor chord of the seventh, the *first* is the most agreeable and useful.

CHAP. V.

ON DERIVATIVE CHORDS.

1. In three-part music, in which only three notes of any chord can be employed at once, it frequently happens that the fundamental notes of the *major chords of the seventh* are omitted. By this omission we obtain a third species of common chord, viz. a minor common chord with an *imperfect fifth.* For example, the major chord of the seventh, having G for its fundamental note,  becomes  a common chord, by losing its fundamental note.

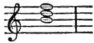
2. This so-called "common" chord has two minor thirds, B D, and D F, and an imperfect fifth in its composition. But as the imperfect fifth is a discord, this chord cannot be a common chord, except in appearance. It belongs to the class of chords called Discords.

3. But inasmuch as this discord consists of *three* notes, it is called the *diminished triad,* to distinguish it from the major and minor common chords, which are sometimes called *triads.*

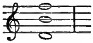
4. The most usual name of this chord, among English writers at least, is *the chord of the imperfect* or *false fifth.*

5. This chord has two inversions—

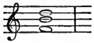
Chord of the false fifth.



Its 1st inversion.



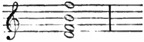
2nd inversion.



In the first inversion there are the discord of the false fifth, and two concords, viz. a minor third between D and F, and a major sixth between D and B.

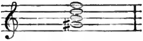
In the second inversion the discord is changed into the major fourth between F and B; the two concords being a major sixth between F and D, and a minor third between B and D.

6. In the chord of the false or imperfect fifth no note is doubled. In the first inversion the note which makes a minor third with the bass note is doubled in music in four parts.



But no other note in this inversion is doubled. In the third inversion, not one of the notes is doubled.

7. In a manner similar to that in which chords of the seventh are founded on common chords by the addition of a minor third, we obtain another discord of four notes, founded on the chord of the imperfect fifth, by adding a minor third *below* thereto.

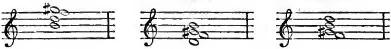


This chord consists of three minor thirds, viz. one between ♯G and B, one between B and D, and one between D and F; and three discords, viz.

two false or imperfect fifths,
between ♯G and D,
and between B and F;
and a diminished seventh between ♯G and F.

8. This chord is called the ***chord of the diminished seventh.*** It has three inversions—

The first. The second. The third.



In each of which the "diminished seventh" is changed into an augmented, or superfluous, second between F and ♯G.

In the first inversion the other two discords are—

the false fifth between B and F,
a major fourth „ D and ♯G;

the concords are—

A minor third between B and D,
minor third „ D and F,
major sixth „ B and ♯G.

In the second inversion, the remaining two discords are—

A major fourth between D and ♯G,
major fourth „ F and B;

the three concords being—

A minor third between D and F,
major sixth „ D and B,
minor third „ ♯G and B.

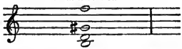
And in the third inversion, the two other discords are—

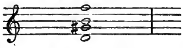
A major fourth between F and B,
false fifth „ ♯G and D;

the three concords are—

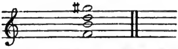
A minor third between ♯G and B,
major sixth „ F and D,
minor third „ B and D.

9. The chord of the *diminished seventh* has also twenty-four permutations, in each of which there are three discords and three concords, and those intervals which are diminished in one position, become augmented intervals, and *vice versa*, by being inverted. For example, the augmented second, F to ♯G, in the first and second inversions becomes a diminished seventh by placing F above ♯G.


First inversion.


Second inversion.

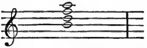
And the false fifth between ♯G and D in the third inversion, becomes a major fourth by placing ♯G over D. Thus—


Third inversion.

10. It may here be observed, that as all diminished, and

superfluous, or augmented intervals are derived only from the 3rd and 6th forms of the minor scale, so also does the chord of the diminished seventh belong to these forms, and to no other. It is most usually employed on the seventh degree of the 3rd form.

11. With the chord of the "imperfect fifth," another chord of the seventh is formed by the addition of a *major third* above. Thus—



This is called the *chord of the seventh*, and *false fifth*. It is composed of four concords and two discords.

The concords are—

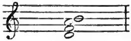
A minor third between B and D,
minor third „ D and F,
major third „ F and A,
perfect fifth „ D and A;

the discords are—

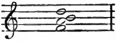
A minor seventh between B and A,
false fifth „ B and F.

12. The chord of the seventh and false (or imperfect) fifth has three inversions, viz.—

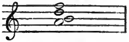
First inversion.



Second inversion.

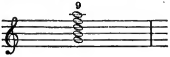


Third inversion.



in each of which there are also four concords and two discords. Moreover, it can be permuted twenty-four ways, like all other chords of the seventh.

13. By adding a major third *below* to the chord of the seventh and false fifth, we get *the chord of the seventh and ninth.* Thus the major third below B, in the example § 11 is G; and with this additional note the chord becomes



a chord of five notes, and composed of the following concords and discords, viz.—

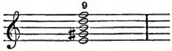
A major third between G and B
perfect fifth „ G and D
minor third „ B and D
minor third „ D and F
major third „ F and A
perfect fifth „ D and A
six concords.

And—

A false or imperfect fifth between B and F
minor seventh „ G and F
minor seventh „ B and A
major ninth „ G and A
four discords.

14. This chord belongs to the major scale only, and is always taken on the fifth degree. It is called *the chord of the seventh and major ninth.*

15. There is another chord of the seventh and ninth formed by adding a *major third below* to the chord of the diminished seventh, thus, taking the example in § 7, and adding E, the major third below ♯G :—



This chord also consists of five notes, and contains five concords and five discords.

The concords are—

A major third between E and ♯G,
perfect fifth „ E and B,
minor third „ ♯G and B,
minor third „ B and D,
minor third „ D and F ;

the discords are—

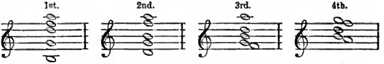
A minor seventh between E and D,
minor ninth „ E and F,

a false fifth between ♯ G and D,
diminished seventh ♯ G and F,
false fifth „ B and F.

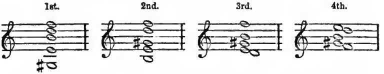
16. This chord belongs only to the minor scale of form 3rd, and its derivative, form 6th. It is usually employed in the fifth degree of form 3rd, and it is called *the chord of the seventh and minor ninth.*

17. These chords of the seventh and ninth are employed only in music written in five parts, and they have four inversions.*

Inversions of the Chord of the seventh and major ninth.

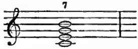


Inversions of the Chord of the seventh and minor ninth.



18. In all that has hitherto been said concerning chords of the seventh, these chords have been constructed by the addition of a *minor third* to a common chord, *except the chord of the seventh and false fifth.*

19. But there is yet another species of chord of the seventh formed by the addition of the *major third above,* to a *major* common chord. For example, taking the major chord of C, and adding to it the note B, the major third above it, thus :—



This species of chord of the seventh occurs generally in the first and fourth degrees of the major scale. It is called the *chord of the major seventh,* and may be inverted thrice.

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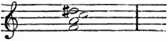
* Some theorists consider these chords as fundamental chords, from which the chords of the diminished seventh, and seventh, and false fifth are derived.

20. It has been shown how chords of the seventh are constructed, by the addition of a third to a common chord. But if, instead of a minor third, an *augmented second* be added to a major common chord, we get another discord called

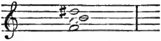
The chord of the augmented sixth.



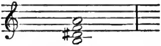
21. This chord belongs only to form 8th of the model minor scale, and it is composed of the following concords and discords, viz.—

A major third	between	F and A	three concords;
minor third	„	A and C	
perfect fifth	„	F and C	
An augmented sixth	between	F and ♯D	three discords.
augmented second	„	C and ♯D	
major fourth	„	A and ♯D	

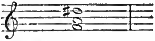
22. The chord of the augmented sixth is formed with a major fourth in place of the perfect fifth. Thus :—



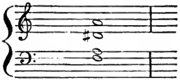
and it is considered by some to be a *modification* of the chord of the seventh and false fifth (§ 11), namely, by making the third of this chord major, instead of minor.



23. This chord is often employed without either the fourth, B, or the fifth, C. Thus :—



24. But if the music is written in four parts, the third (A) is doubled, and the effect is very grand—

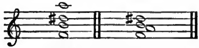


25. But all these forms of the chord of the augmented sixth belong to the 8th form of the model minor scale, in which alone the ♯D is found.

24. When this chord consists of the notes F, A, B, ♯D, as in § 22, the concords are—

A major third	between	B and ♯D	two concords;
major third	,,	F and A	
A diminished third	between	♯D and F	four discords.
false fifth	,,	♯D and A	
false fifth	,,	B and F	
minor seventh	,,	B and A	

27. But in consequence of the extreme harshness of the discord of the diminished third between ♯D and F, this interval is generally inverted, and the augmented sixth is used in its stead.



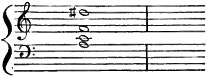
And there are four discords and but two concords in whatever position the upper notes may be arranged.

28. In the third form of this discord, namely, when the fourth and fifth are both omitted, as in § 23, there is but one concord, the major third between F and A.

29. And when the third in this chord is doubled, as in § 24, there are but two, viz. an octave between A and A, and a major third between F and A: but then this third is doubled, and the octave forms a false fifth with ♯D, which is one of the most agreeable discords. By doubling the third, the chord is composed of two concords and three discords.

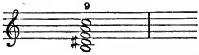
30. The chord of the augmented sixth should have the second degree of the sixth form of the model minor scale for the bass note as in §§ 20, 22, 1st ex., §§ 23, 24, 27.

31. This chord admits of one inversion only, viz. that in which the third (A) to the bass note (F) is the lowest or bass note, the chord assuming the following form—

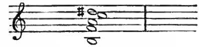


without the fourth (B).

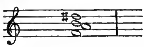
32. The chord of the seventh, with major third and false fifth, shown in § 22, is considered as a fundamental chord, and a chord of the ninth can therefore be constructed with it, by the addition of a minor third above, thus :—



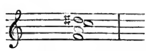
one of the positions of which has ♯ D uppermost, thus :—



We can easily perceive how the two chords of the augmented sixth—



and

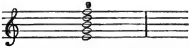


are obtained from this chord of the ninth ; the first being its second inversion with the ninth (C) *omitted*, and the second, the same inversion without the fundamental note (B), and with the ninth (C) *retained*.

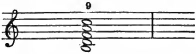
33. The chord of the major ninth in § 13, was formed by adding a major third below, to the chord of the seventh and false fifth ; and the chord of the minor ninth, by adding a major third below to the chord of the diminished seventh, § 15. It will be the same thing if we take the major chord of the seventh and add a major third *above*, to form the chord of the major ninth, and a minor third *above* to form the chord of the

minor ninth, as will be seen by examining the examples in §§ 13 and 15.

34. But the chord of the minor ninth is also found with major chords of the seventh, by the addition of the minor third below.



35. Similarly, a chord of the minor ninth may be formed on the chord of the seventh and false fifth, by adding a minor third above.



36. The chord of the minor ninth, with major third and false fifth, in § 32, is a modification of this chord, and is employed in its stead.

CHAP. VI.

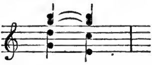
PREPARATION OF DISCORDS.

1. In many instances the discords contained in the various chords exhibited in Chapters IV. and V., and in the inversions of these chords, are extremely disagreeable, if produced abruptly without preparing the ear to receive them.

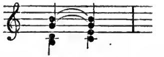
2. Hence certain sounds which are very dissonant in one chord, must be heard as consonances in a chord previously to their becoming dissonances. This is called Preparation of a Discord.

3. One of the most remarkably dissonant chords is the chord of the major seventh, (see § 19, Chap. V.) This chord is prepared by introducing the discordant notes in a common chord

or one of its inversions, as concords, previously to their being heard as discords, thus :—



or



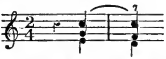
In both these examples, the note B, which is the major seventh to C, is a concord in the chord G, and its inversion.

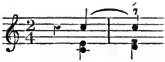
4. Those discords only require preparation which sound the most harsh and disagreeable. Hence those which do not sound disagreeably harsh and rough do not require preparation.

5. Thus the seventh in major chords of the seventh never requires preparation, it being always agreeable; neither is it necessary to prepare the seventh in minor chords of the seventh.

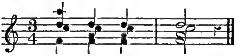
6. The dissonant note should always be prepared sufficiently long for the ear to receive it with pleasure; it ought to be heard as a concord for as long a time as it is heard as a discord.

7. The most satisfactory preparation of a seventh is in an unaccented portion of the measure, so that the discord may occur on the next accented part.

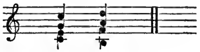




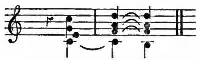
8. But, as before remarked, minor chords of the seventh may be employed without preparation, and are often very effective when they appear in the first inversion of the chords.



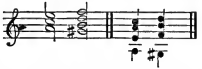
9. Neither does the chord of the seventh and false fifth always require preparation, for it may be employed thus :—



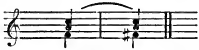
But it is better when prepared thus :—



10. Nor does the chord of the diminished seventh require preparation, but it may be employed without, thus:—

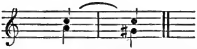


11. The discord of the false fifth is prepared in a previously existing concord, thus:—

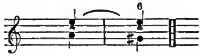


In this example the note C is a perfect fifth to F, before it becomes an imperfect fifth to ♯ F

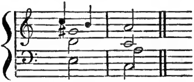
12. The discord of the diminished fourth is prepared also in a previously existing concord, thus:—



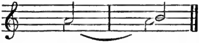
13. This discord usually appears accompanied with a major third *over it;* or, which is the same thing, with the minor sixth to the bass note, thus:—



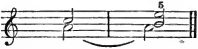
14. It is not always necessary to prepare the discord of the diminished fourth; and it is frequently used unprepared in the following manner:—



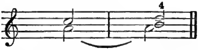
15. The discord of a second is prepared in the bass:—



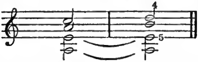
16. This discord may be accompanied by the fifth to the bass note :—



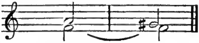
Or by the fourth to the bass note :—



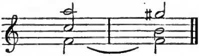
Or by both the fifth and the fourth to the bass note :—



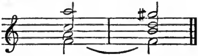
17. The augmented second is also prepared in the bass :—



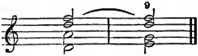
And may be accompanied by the fourth :—



Or by the sixth and the fourth :—

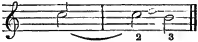


18. The chords of the ninth with major thirds do not require preparation; but the chord of the ninth with a *minor* third should be prepared.

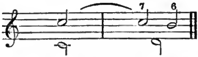


19. By comparing § 15 with § 7, we see that the discord of the second and the discord of the seventh are inversions of each

other. For example, the second is prepared in the bass, i. e., the note which becomes a second is a bass note in a previously existing concord, and it makes a second with a note in a part above it,

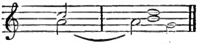


the resolution being made by the bass note. Let these parts be inverted—

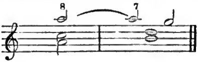


and the prepared discordant note becomes a seventh, the resolution being now made in the upper part.

20. So also the second, accompanied by the fourth,



when inverted, becomes a seventh accompanied by the third.



CHAP. VII.

ON THE RESOLUTION OF DISCORDS.

1. Whenever a discord has been heard, the ear remains in a state of suspension, or doubt, until the discord not only ceases but is followed by a concord.

2. And although the ear will not only tolerate, but feel delight in, a succession of discords; yet, whenever they cease, there must be *ultimately* a concord, in order that it may be perfectly satisfied, and freed from all suspense.

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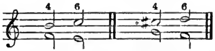
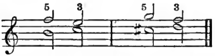
3. This satisfying and liberating the ear by solving the doubt and suspense occasioned by discords, by means of concords, is called *the Resolution of Discords.*

4. The resolution of a discord is performed in two ways; by the "part," in which the discord appears, moving upward or downward to the concordant note, in the next chord.

5. The ear seems generally more satisfied when the discordant part proceeds to the *nearest* degree. Thus, a major fourth is most satisfactorily resolved when it proceeds upwards to the next degree.

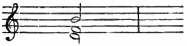


A false fifth, which is the inversion of this, gives most satisfaction to the ear when it proceeds downwards—

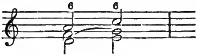


6. In both the above examples, the notes which form the discords proceed by the step of a major semitone to the concords.

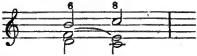
7. But in the first inversion of the chord of the imperfect or false fifth,—



to which the discord of the major fourth belongs, the note F may ascend by the step of a tone to G:—



or it may descend to E, as before.



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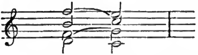
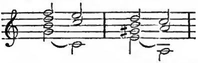
8. And when, in four-part music, this note F is doubled, one of the notes F ascends one degree, and the other descends, thus.

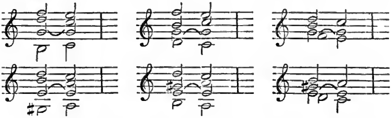


9. We may now see why the minor seventh is most pleasingly resolved downward by proceeding to the next degree. For the chord of the false fifth is derived from the major chord of the seventh, by omitting its fundamental note.

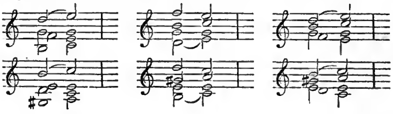
10. In the usual progression of the parts of the major chord of the seventh, the fundamental bass note rises a fourth; or, which is the same thing, falls a fifth: the third rises one degree, the fifth falls one degree, and so does the seventh.



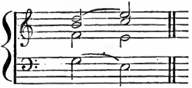
11. And this motion of the third, fifth, and seventh, obtains also in each of the three inversions of this chord, and in all positions thereof. But the inverted fundamental note is stationary.

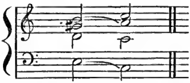


12. But the fifth to the fundamental note may also rise one degree in all three inversions.

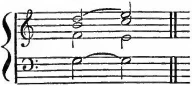


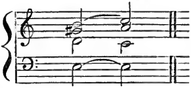
13. And the fifth may also rise in the fundamental chord itself, when the fundamental note descends to the third, and not to the fifth, below.



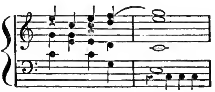


But this progression is best avoided, and the fundamental note should remain stationary, thus :—

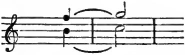




Or else the seventh should *rise*, as in the following example by Mozart—



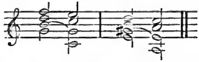
in which the *third* to the fundamental note is omitted, and the fifth doubled, hereby avoiding the disagreeable effect of a false fifth *ascending* to a perfect fifth.



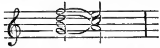
14. We perceive by the above example from Mozart, that the minor seventh does *not always* resolve downward to the next degree, but may also proceed upward.

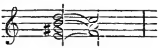
15. Moreover, the *third* to the fundamental note of the major chord of the seventh does not always ascend one degree, as in the foregoing examples, but it may descend a third, thus :—

Mozart, Bach, and others.



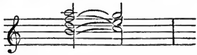
16. In the resolutions of these discords, the fundamental note sometimes rises one degree, and in this case the seventh proceeds downward, as does also the fifth.





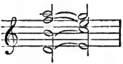
The third should rise parallelly with the fundamental note.

17. In the chords of the seventh and false fifth, both seventh and fifth proceed downward in their resolution into concords; and the bass-note and its third proceed upward.

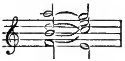


18. And the same progression of these notes takes place in all the inversions of this chord,

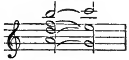
1st inversion.



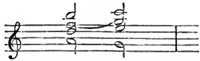
2nd inversion.



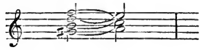
3rd inversion.



19. But in the third inversion, the fifth (F) may also rise to G, the next degree.

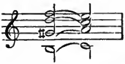


20. In the chord of the diminished seventh, the *diminished seventh* and the *false fifth* must proceed *downwards* to their next degrees; the *bass note* and *its third* proceed *upward* to their contiguous degrees, thus:—

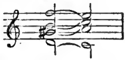


21. And the same progression of the parts of this chord takes place in each of the three inversions.

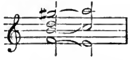
1st inversion.



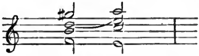
2nd inversion.



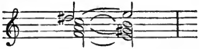
3rd inversion.



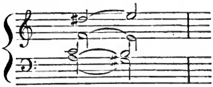
22. Here also in the third inversion, the seventh to the fundamental note may proceed upward to the next degree.



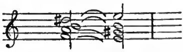
23. In the chord of the augmented sixth (Chap. V. § 20, *et seq.*) this sixth always ascends to the next degree; the bass note, its third and its fifth, fall to the next degree, and all by the interval of a major semitone.

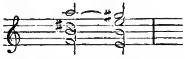


24. The motion of these notes is the same in the only inversion of this chord.



25. When the fourth is employed instead of the fifth, this fourth remains stationary, while the other notes of the chord move as before.





26. In the third form of this chord, wherein there is neither fourth nor fifth to the bass note, the same resolution takes place as above, viz. the augmented sixth rises, and the bass note and its third both fall.

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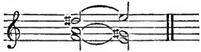
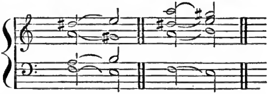
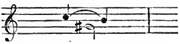
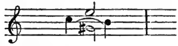


27. But when this third is doubled, the one nearest to the bass note *rises*, and the other falls, to the next degree.



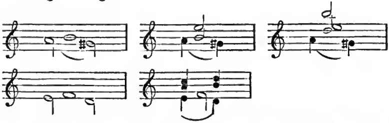
28. The discord of the diminished fourth is resolved by its falling a major semitone to the next degree.



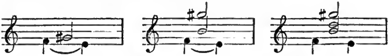


See also the example in Chap. VI. § 14.

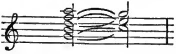
29. The discord of the second is resolved by the bass descending one degree.

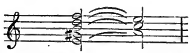


30. In like manner the discord of the augmented second is resolved by the bass descending one degree.

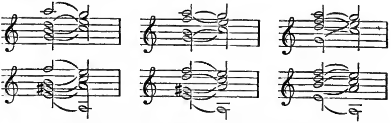


31. The resolutions of the chords of the ninth are similar to those of chords of the seventh, viz. the major third rises a major semitone to the next degree, the seventh and ninth fall one degree, and the fifth rises one degree.





32. In the chord of the ninth, either the seventh, the fifth, or the third is omitted in four-part music.



33. The above are called independent ninths, and the ninth should always be *above* the third and fifth; certainly never below the third.

CHAP. VIII.

ON SUSPENSION OF CONCORDS.

1. We have seen, in the foregoing chapter, in what manner the ear is relieved from the doubt and suspense occasioned by a discord, viz. by resolving the discord into a concord.

2. But a very pleasing effect is produced by the *retardation of the resolution* of a discord. This ratardation does not take place in the *whole* chord which contains the discord, or discords, but only in that of one or more of the discords themselves.

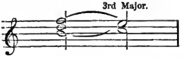
3. Hence a chord containing the discords may be resolved in part, and part of it may be delayed in its resolution into the succeeding concord, causing hereby a delay of the concord itself.

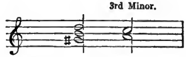
4. This delay of the whole resolution is called *suspension of concords.*

5. Hence common chords and their inversions can be sus-

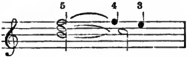
pended; consequently the concords which can be suspended are the major and minor thirds, the major and minor sixths, perfect fifth, perfect fourth, and the octave.

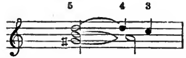
6. Taking the chord of the false fifth, for example, we find the discord (the false fifth) can be resolved into either a major third or a minor third.





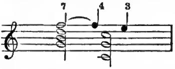
7. But instead of resolving the false fifth at once, as in these examples, its resolution may be delayed until after the bass note and its third are resolved, thus:—

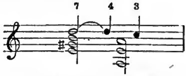




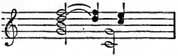
and by this delay the concord of the major or minor third is suspended.

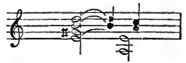
8. In like manner the seventh, in chords of the major seventh, is made to suspend the concord of the major or minor third.



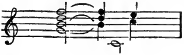


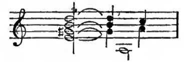
9. So also the fifth, in the chords of the seventh, is made to suspend the concord of the eighth, at the same time with the suspension of the third.



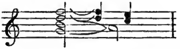
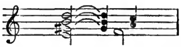


10. Similarly the octave may be suspended by holding on the third, and resolving it with the fifth and seventh.

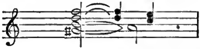




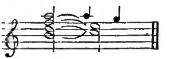
11. But if the fundamental note of the chord of the seventh rises only one degree, the suspended concord is the perfect fifth, instead of the major or minor third; and the suspended eighth is now the suspended third.

12. The suspension of the third and fifth also occurs in the partial resolution of the chord of the diminished seventh.



13. Concords are suspended also by the retardation of some of the parts in the chord of the seventh and false fifth, thus:—



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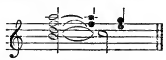
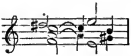
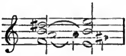
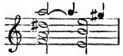
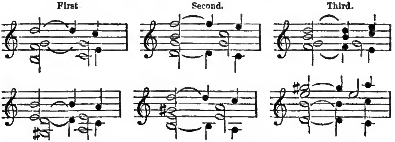


14. And also by delaying the motion of some of the parts in the resolution of the chord of the augmented sixth.

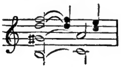




15. And these suspensions may all be made in the inversions of the chords as well as in the chords themselves. For example, by the inversions of the major chords of the seventh.

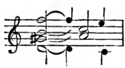


16. So also by the inversions of the chord of the diminished seventh.

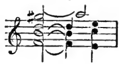
First.



Second.

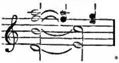


Third.

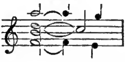


17. And also by the inversions of the chord of the seventh and false fifth.

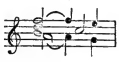
First.



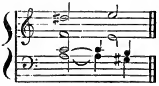
Second.



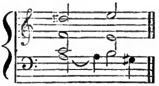
Third.



18. And also by the inversion of the chord of the augmented sixth.



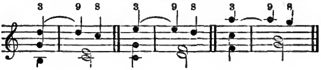
or



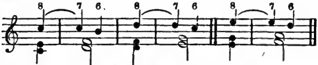
19. Moreover it may be observed, that the concords of the major and minor sixths are suspended in some of the inversions, as is also the perfect fourth in the third inversion of the chord of the seventh and false fifth, § 17, and in the third inversion of the chord of the major seventh in the upper example, § 15.

20. Suspension of concords is created whenever any one of the constituent notes of a common chord or its inversions is delayed, by the continuing a note foreign to these chords, but which belonged to the chord just before used. And this previous chord may have been a common chord or one of its inversions, instead of a discord.

21. The following are examples of the suspension of the eighth without previously existing discords.



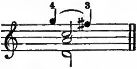
22. So also sixths are suspended without previously existing discords.



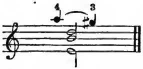
23. It does not follow necessarily that the suspended concord belongs only to a common chord, or one of its inversions, for it may be one of the constituent parts of a discord.

24. For example, the third in the chords of the seventh may be suspended by a fourth.

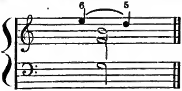
1st.

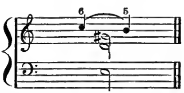


2nd.



25. In like manner the fifth in the major chord of the seventh is suspended by the sixth.

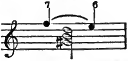




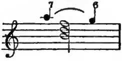
26. Hence we see there is a similarity between the suspension of concords and the resolution of discords, but yet there is this difference, viz. in the first the chords of the seventh, &c., are partially, whereas in the latter they should be totally, resolved.

27. Thus the chords of the seventh resolve into first inversions of chords, when the seventh is merely a suspension of the sixth.

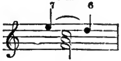
First.



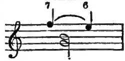
Second.



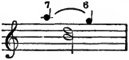
Third.



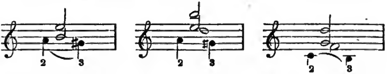
Fourth.



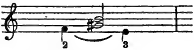
Fifth.



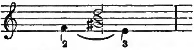
28. In like manner the chord of the second becomes a first inversion of another chord;



and the chord of the augmented second becomes a common chord,

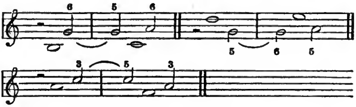


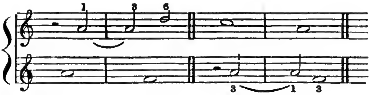
or a major chord of the seventh.

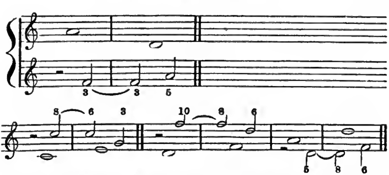


29. Thus far we have seen in what manner concords are suspended by the holding on, or retardation of discords.

30. But it frequently happens that concords are employed to suspend other concords. In this case the suspending concords are treated so far like discords that they must be prepared in an unaccented portion of a measure, be continued through the next accented portion, and proceed to the next concord in the succeeding *unaccented* portion of the measure.







31. In the above examples the note of suspension commences on the second portion of the measure, is held on through the first portion of the following measure, and moves to another concord in the second portion of this measure. This kind of suspension is called *consonant syncopation, consonant ligature, consonant suspension,*—to distinguish it from the foregoing suspension by discords, this latter kind being called *dissonant suspension, dissonant ligature, dissonant syncopation.*

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RUDIMENTS OF MUSIC.

◆

DIVISION III.

CHAP. IX.

ON PREPARATION, RETARDATION, AND RESOLUTION OF DISCORDS.

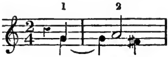
1. In the foregoing chapters (VI. and VII.) is shown in what manner discords are prepared and resolved, and in Chap. VIII. is shown how concords are suspended by discords.

2. In Chap. VI. we have seen that the fundamental discords, viz. the chords of the seventh, chords of the ninth, and chords of the seventh and false fifth, may be employed without preparation.

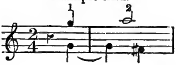
3. Those discords which require preparation are the second, fourth, seventh, ninth, eleventh, and thirteenth.

4. The discord of the second is prepared in the *bass* or lower part, which then becomes a suspension of the concord formed by the upper note of the discord, and the note on which the bass note resolves.

Example 1st.



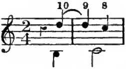
Example 2nd.



In the second example the note A is nine degrees above the note G; but as G is the prepared discordant note which suspends the concordant note ♯F, this discord is called the *second.*

5. The discord of the ninth differs from the above, inasmuch as the discordant note is prepared in the *upper* part, which then becomes a suspension of the concord into which it resolves.

Ex. 1st.



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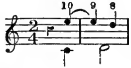
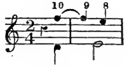


Ex. 3rd.



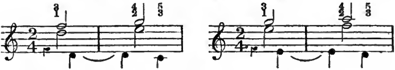
6. In these examples the *ninth* is prepared by a note ten degrees distant from the bass note, whereas the *second* is prepared by a note, either in unison or an *octave* lower.

7. Hence we say the second is prepared by the unison, and the ninth by the tenth, or octave third.

8. The perfect fourth is a discord only when it is employed as a suspension of a concord. In all common chords it is a perfect concord.

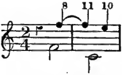
9. Perfect fourths thus considered, are employed to accompany the discord of the second in music of three or more parts. Hence they are prepared in the bass, at the same instant with the second.

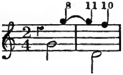
Examples of fourth and second.

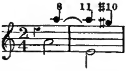


10. In this case the bass note is the discord which retards or suspends both concords, viz. the third and the fifth.

11. When this discord is inverted, and is made in the upper part, it becomes an eleventh, and the preparation and resolution are both made by this *upper* part.







12. The perfect eleventh thus employed is accompanied with the perfect fifth, with which it forms the discord of the seventh.

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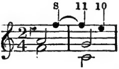
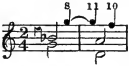
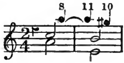


Ex. 2nd.



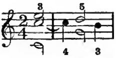
Ex. 3rd.



13. Here we see the eleventh forms a seventh with the fifth, and resolves into the sixth therewith, at the moment when it resolves into the tenth to the bass note.

14. This eleventh may be employed an octave lower, i. e. at the distance of a fourth;

Ex. 1st.



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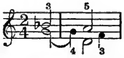
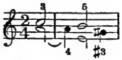
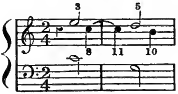
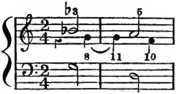


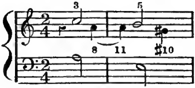
Ex. 3rd.



which is the same as if the bass note were an octave lower.







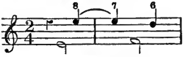
15. In all these cases the perfect eleventh is considered as the

perfect fourth, and when it is *below* the perfect fifth, it forms the discord of the second with it, and resolves into the third below the fifth, as in § 4, at the instant it makes a third (or tenth) with the bass. Hence we say the fourth suspends the third, and the eleventh suspends the tenth.

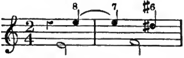
16. Sevenths require preparation when they do not belong to the principal or secondary chords of the seventh.

17. Thus all major sevenths require preparation; they suspend sixths, and consequently resolve into them.

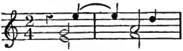
Example 1st.

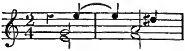


Example 2nd.

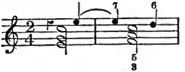


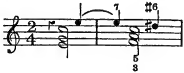
18. Major sevenths are accompanied by the third, in music in three parts.



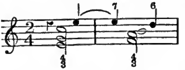


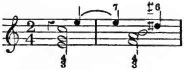
19. And in four-part music the major seventh is accompanied by the third and fifth.



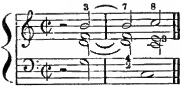


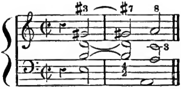
20. And also by the third and fourth.



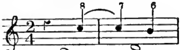


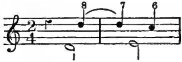
21. When the major seventh is accompanied by a *second* and *perfect fourth*, it is resolved upward into the eighth. For in this the seventh, fourth, and second, are merely prolongations of the third, eighth, and seventh in the major chord of the seventh, and retard or suspend the eighth and third.

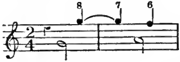


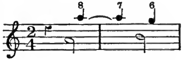


22. All *minor sevenths* require preparation whenever they are suspensions of sixths.

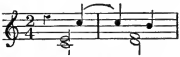


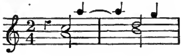




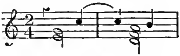


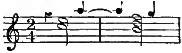
23. A minor seventh may be accompanied with the third only.



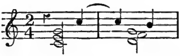


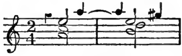
Or by the third and fifth.



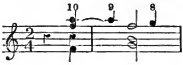


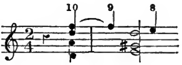
Or by the third and fourth.



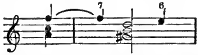


24. In the chords of the ninth with major thirds, the ninth does not require preparation, except when it is retarded, i. e. except it suspends an eighth.

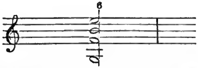




25. The seventh, in the chord of the diminished seventh, requires preparation only when it is employed as a suspension to a sixth.

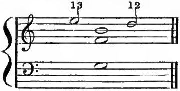


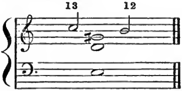
26. In the chord of the seventh with a major third, called the major chord of the seventh, the fifth is sometimes omitted, and the sixth to the fundamental note of the chord is used instead.



27. But as this sixth is never employed *below* the seventh, it is thirteen degrees above the fundamental note of the chord.

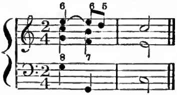
28. The thirteenth thus employed suspends the twelfth, i. e. the octave fifth, into which therefore it resolves.

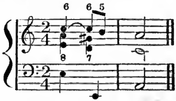




These chords are called chords of the seventh, sixth, and third, and become, by the resolution of the (thirteenth or octave) sixth, major chords of the seventh.

29. These chords of the thirteenth may be employed with or without preparation : without as above, and with as follows :—





30. In the chords of the ninth with minor thirds, the ninth requires preparation, since it always suspends the eighth.

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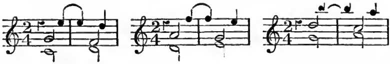
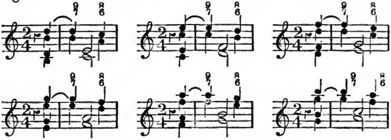
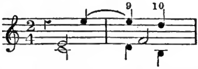


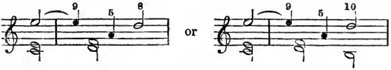
31. In all chords of the ninth, when the fifth to the fundamental note is omitted, the ninth may be accompanied with the seventh and third; and the seventh may resolve into the sixth, which it has suspended, while the ninth resolves into the eighth.



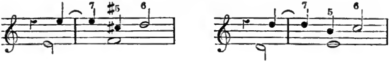
32. In resolving the discord of the ninth, the eighth is some times changed into another concord by the downward movement of the bass at the instant of resolution.



33. And sometimes this discord has a sort of double resolution, first on some concord to which the eighth belongs, and then on the eighth, or on a note with which the eighth concords.



34. The seventh also has a similar kind of double resolution.

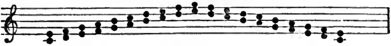


CHAP. X.

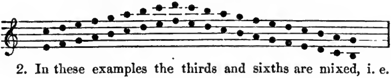
ON PROGRESSIONS.—CONCORDS.

1. ANY number of imperfect concords may be taken in succession, and the motion of the parts containing the concord may be direct (or parallel.)

Example of thirds in parallel motion.

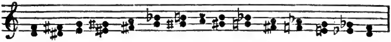


Example of sixths in parallel motion.



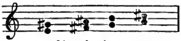
2. In these examples the thirds and sixths are mixed, i. e. there are both major and minor; indeed the sequences of concords are such as are found in the degrees of one and the same scale. But a sequence of minor thirds only, although it must consist, in part, of sounds foreign to the scale, is always pleasing.

Example of minor thirds in parallel motion.



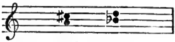
3. More than two major thirds in parallel motion become displeasing, in consequence of too great a departure from the ordinary degrees of the scale, and the effect of major thirds in succession is most agreeable when they proceed by the step of a semitone, as in the second of the following examples.

Ex. 1st.



Not pleasing.

Ex. 2nd.



Good.

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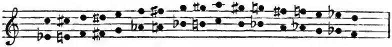
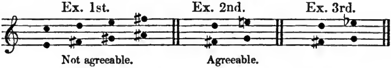
4. And because a major sixth is the inversion of a minor third, a sequence of major sixths is also agreeable.

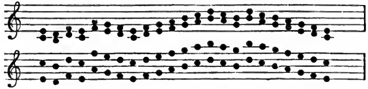
Example of major sixths in parallel motion.



5. But a sequence of minor sixths is not agreeable, since these concords are inversions of major thirds, except only when two at most are taken in succession, and they are most agreeable when they proceed by the step of a semitone.

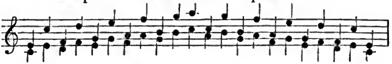


6. The parallel motion of concords is more pleasing when they alternately ascend and descend.

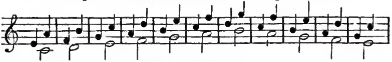


7. Thirds and sixths may succeed each other in every kind of motion.

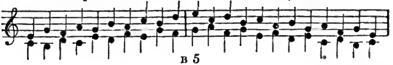
Example of thirds and sixths in parallel motion.



Example of thirds and sixths in oblique motion.

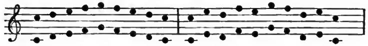


Example of thirds and sixths in contrary motion.

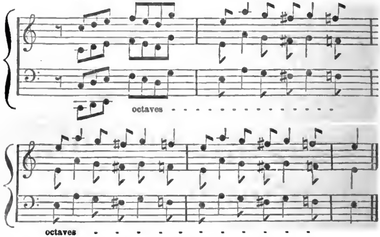


8. A succession of *perfect* concords of one kind is disagreeable, except it be a succession of octaves, which are nearly of the same effect as unisons.

Example of octaves.

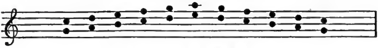


Example of an octave passage, from Mozart's grand Mass in C.

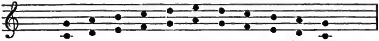


But a succession of perfect fourths or perfect fifths is unpleasant in its effects.

Example of perfect fourths.

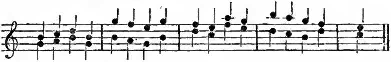


Example of perfect fifths.



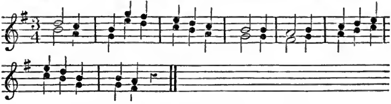
9. We may now perceive that those sequences which are either pleasing or displeasing in one position are also pleasing or displeasing respectively, when in an inverted position.

10. Moreover, thirds and sixths are more pleasing when short sequences of each alternate with each other.

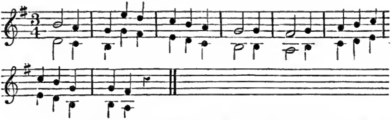


11. Yet all sequences of imperfect concords too strictly adhered to become mechanical and insipid, unless they are rhythmically arranged; and even then, they do not entirely lose their insipidity.

Example of thirds, from a Kyrie Eleison, by Jos. Haydn.

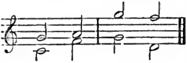


Example of the same inverted, i. e. in sixths.

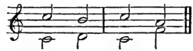


12. Imperfect concords may follow perfect fifths and octaves in any kind of motion.

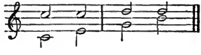
Ex. in direct motion.



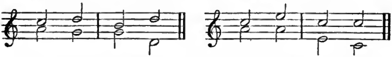
Ex. in contrary motion.



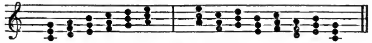
Ex. in oblique motion.



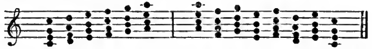
13. But when a perfect fifth, or octave, follows an imperfect concord, the motion should be either contrary, or oblique.



14. Because a succession of perfect fifths is not pleasing, a succession of common chords is not good, notwithstanding the mixture of imperfect concords, viz. thirds, of which these chords are composed.

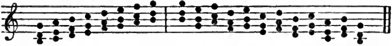


15. Nor is the effect good, although better, by adding the octave to the bass note.

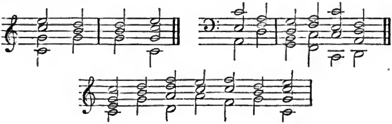


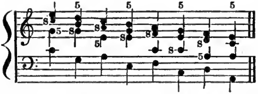
The improvement is owing to the perfect concord of the octave, and to the additional imperfect concords, viz. the sixths.

16. But a succession of first inversions of common chords is always pleasing, notwithstanding the fourths contained between the two upper parts.



17. One common chord may succeed another, provided there is no parallelism of perfect fifths and octaves between *any* two parts. This parallelism is avoided by giving the parts (which would otherwise contain a succession of fifths, or octaves) a contrary motion.

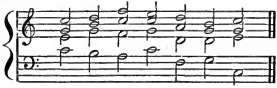




Here one fifth rises and the next falls; so also one octave falls and the next rises, so that there are neither two fifths nor two octaves consecutive.

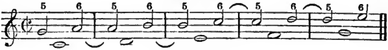
18. But this alternation is too severe and formal for some kinds of music; it is very suitable for very grave and solemn psalmody, and other ecclesiastical music.

19. The formality of the last examples is lessened by employing inversions of chords instead of the common chords themselves.

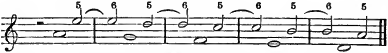


20. The disagreeable effect of a succession of fifths is lost when they are employed by syncopation or suspension, when they alternate with sixths in the following various ways.

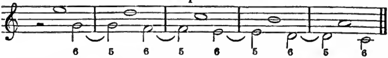
Example 1st.



Example 2nd.

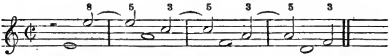


Example 3rd.

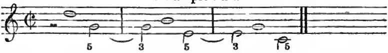


21. In like manner fifths are good when they alternate with thirds, or octaves, as follows:—

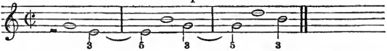
Example 1st.



Example 2nd.

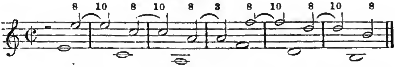


Example 3rd.

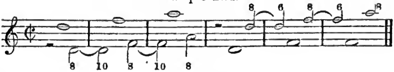


22. A succession of octaves, otherwise forbidden, is also good when employed in syncopation of consonances, either alternating with thirds and their octaves or tenths, or with sixths.

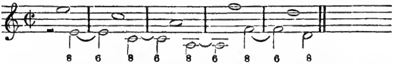
Example 1st.



Example 2nd.



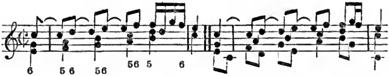
Example 3rd.



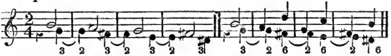
23. From these examples we see that the dissonant effect of a succession of fifths or octaves arises chiefly from their being unprepared in foregoing concords, whereas this succession is pleasing when it occurs by preparation or syncopation. Moreover, we may observe that fifths and octaves thus employed by ligature are treated as prepared discords.

24. But sequences of all kinds, whether of prepared discords,

or of consonant syncopations, such as we have just used, become less pleasing by too frequent repetition, and the ear is best satisfied with only three. Haydn has employed syncopated fifths, thus:—

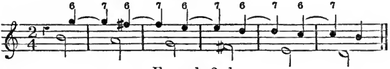


25. Discords alternating with concords in sequence are always good in effect. Seconds resolving into thirds or sixths, for example.

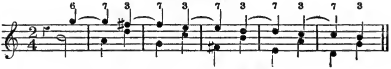


26. And the inversions of these, forming sequences of sevenths resolving into sixths, or thirds.

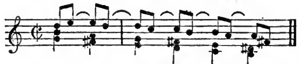
Example 1st.



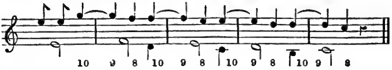
Example 2nd.



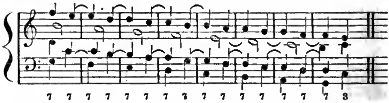
Example from Mozart's grand Mass in C.



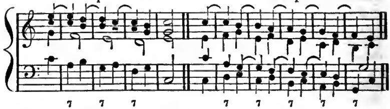
27. The prepared ninth may also alternate with concords; for example, with tenths (or octave thirds) and eighths.



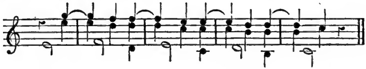
28. *Chords of the seventh* may follow one another in sequence without the interposition of common chords, or their inversions.



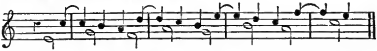
29. Chords of the seventh may also alternate with common chords.


Example 1st. Example 2nd.

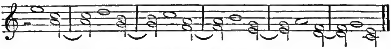
30. The sequences of sevenths and ninths, alternating with concords, may be combined.



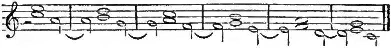
31. The discord of the prepared fourth may alternate with thirds and sixths in like manner.



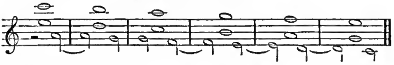
32. So also the double discord of the fourth with the second may alternate with common chords in sequence.



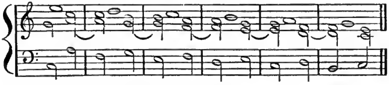
33. And also the second accompanied with the fourth.



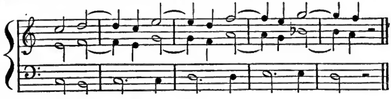
Or thus, with the upper parts inverted.



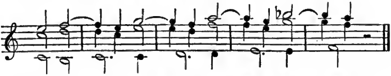
34. But these sequences are better with a bass note, to which the fourth and second make a fifth and third.



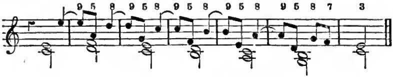
35. The double discord of the ninth and fourth may also alternate with common chords in sequence.



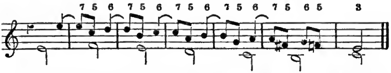
Or with the upper parts inverted.



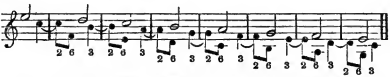
36. The resolution of a discord does not always take place *immediately* on the nearest concord, but proceeds first to some other concord belonging to the same chord, and afterwards to the regular concord itself. The prepared ninth, for example, may fall a fifth to the fifth above the note with which it makes the discord of the ninth, and then proceed to the eighth above the same note, thus :—



37. In like manner the prepared seventh may fall to the fifth to the bass note, and then proceed to the sixth.

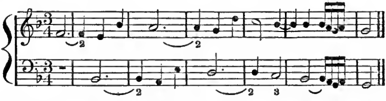


38. Similarly, the second may fall a fifth, and then return to the third below the note with which it forms the discord of the second.



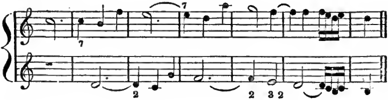
39. The above double resolutions of discords have a playful and very pleasing effect, and are often employed in sequences in light and graceful compositions.

40. These kind of sequences are very beautiful when they are not so closely in succession, as may be seen by the following example from Mozart's "Requiem," or service for the dead.

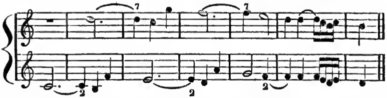


Here the discord appears first in the upper part, and then in the lower, and so on alternately to the end of the sequence.

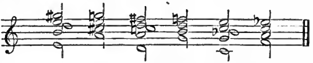
41. The same sequence is equally beautiful when the parts are an octave asunder, and the seconds become sevenths in the upper part.



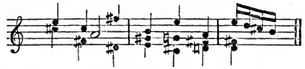
Or thus :—



42. Sequences of major chords of the seventh, or *dominant seventh*, as they are also called, may be sometimes employed with effect.

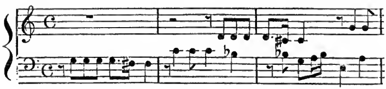


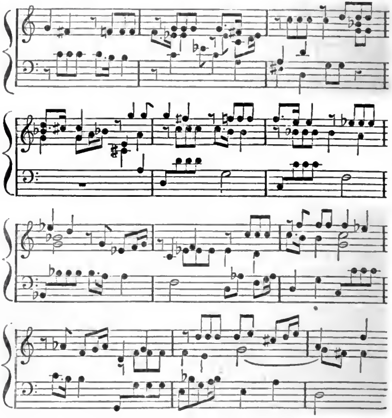
43. But like all other sequences, there should not be too many of these chords in succession, and it is much better to mingle them with common chords alternately, as in the following example from Mozart's "Laudate Dominum."



44. Discords may also be employed in sequence, without resolution of the discordant note into concords, but it is better to have a mixture of different kinds of discords. Thus Mozart, in the chorus "Quam olim Abrahæ," in his "Requiem" has mingled seconds, augmented seconds, major fourths, fourths with seconds, sevenths. &c. &c. in the most happy variety of succession, in the the very outset of the chorus.

Chorus, "Quam olim Abrahæ." Mozart.





CHAP. XI.

ON THE FUNDAMENTAL HARMONIES OF THE SCALES.

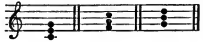
1. The seven sounds of the model major scale furnish us with the means of constructing the following harmonies, viz.—

Six common chords, three major and three minor.
One chord of the imperfect fifth.
One major chord of the seventh.

Three minor chords of the seventh.
Two chords of the major seventh.
One chord of the seventh and imperfect fifth.

2. In this enumeration of the harmonies contained in the scale, the octave sounds, both above and below, are included in those of the scale itself, as being one and the same.

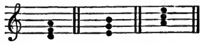
3. The three major common chords found within the scale are —the chord of C, the chord of F, and the chord of G.



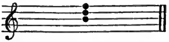
The fundamental notes being the first, fourth, and fifth degrees of the scale.

4. The three minor chords found therein are—

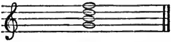
The chord of D, the second.
The chord of E, the third.
The chord of A, the sixth.



5. The chord of the imperfect fifth is formed with the three notes, B, D, and F; the bass note being the seventh degree of the scale.

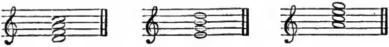


6. The major chord of the seventh is formed with the notes G, B, D, and F.

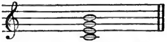


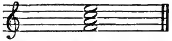
The fundamental note being the fifth degree of the scale.

7. The three minor chords of the seventh are founded on the three minor chords, on the second, third, and sixth degrees.

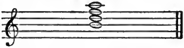


8. The two chords of the major seventh are founded on the major chords of C and F, the first and fourth degrees of the scale.

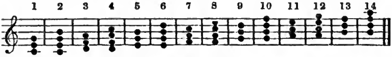




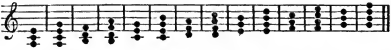
9. The chord of the seventh and false, or imperfect, fifth is formed on the chord of the false fifth.



10. Hence we obtain fourteen fundamental chords, or harmonies from the model major scale.



11. By reverting to the 1st form of the model minor scale, (Div. II. Chap. IV. § 6,) we perceive that precisely the same chords, and no others, are obtained from it.

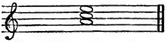


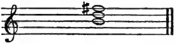
12. This form of the model minor scale has therefore every thing in common with the model major scale, and hence it is wholly dependent on it, and these scales are the only two which can properly be called relative scales.

13. In the 2nd form of the model minor scale we can find the following fundamental harmonies :—

Two *minor* common chords, viz.

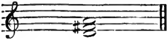
The chord of A, and the chord of B ;

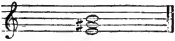




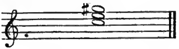
Two *major* common chords, viz.

The chord of D, and the chord of E ;

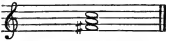


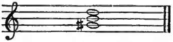


The chord of the augmented fifth, on C, the third degree of the scale.

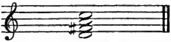


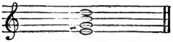
Two chords of the false fifth, on ♯F and ♯G, the sixth and seventh degrees of the scale.



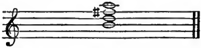


Two major chords of the seventh, on D the fourth, and on E the fifth, degree of the scale.

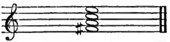


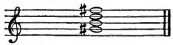


One minor chord of the seventh on B, the second degree of the scale.

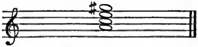


Two chords of the seventh and false fifth, one on ♯F the sixth, and one on ♯G the seventh degree of the scale.

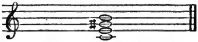




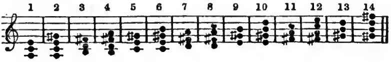
One chord of the major seventh with minor third on A, the first degree.



And a chord compounded of a major seventh and augmented fifth on C, the third degree of the scale.



14. The fourteen harmonies contained in the 2nd form of the minor scale are therefore—

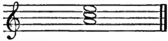


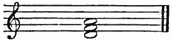
15. Of these fourteen chords *one* alone is identical with the fourteen obtained in the 1st form, viz. the minor chord on A, the first degree of the scale.

16. Hence we perceive how great the difference is between the two minor scales of the forms 1st and 2nd.

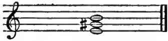
17. In like manner we obtain fourteen harmonies from the 3rd form of the model minor scale, viz.:—

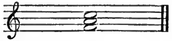
Two minor common chords on the first and fourth degrees.



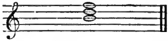


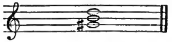
Two major common chords on the fifth and sixth degrees.



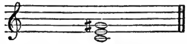


Two chords of the false fifth on the second and seventh degrees.

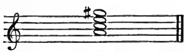




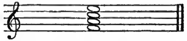
And a chord of the augmented fifth on the third degree.



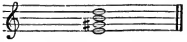
18. With the minor chord of A, we get a chord of the major seventh with a minor third.



And with the major chord of F we obtain a chord of the major seventh with a major third.



With the major chord E we get *the major chord of the seventh,* as in Form 2nd.



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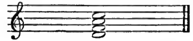
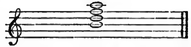
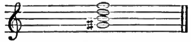
With the minor chord D we obtain a *minor chord of the seventh*, as in Form 1st.



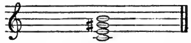
With the chord of the false fifth, on B, the second degree of the scale, we get the *chord of the seventh and false fifth*, the same as in Form 1st.



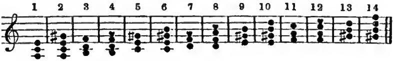
With the chord of the false fifth on ♯ G, the seventh degree, we get the chord of the diminished seventh;



a chord not obtained in any other form of the minor scale: And, lastly, with the chord of the augmented fifth we get the chord of the major seventh and augmented fifth, the same as in Form 2nd.



So that the fourteen harmonies belonging to Form 3rd are,—



19. Of the above harmonies of the 3rd form of the model minor scale, seven are identical with seven belonging to the 1st form, or rather to the model major scale, viz. the first, third, fourth, seventh, eighth, eleventh, and twelfth chords in the series.

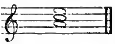
The second, fifth, sixth, ninth, tenth, and thirteenth, are identical with those in the 2nd form: the last chord (the diminished seventh) being generated in the 3rd form only.

20. From all this we perceive that these three forms are

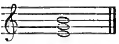
different scales; that the 2nd has only one chord in common with the 1st, and that the 3rd has one half of its harmony in common with the first, and six-sevenths of its remaining harmony in common with the 2nd form.

21. The degrees of the 4th form of the model minor scale furnish also fourteen harmonies, or chords, of which there are three minor common chords, viz.:—

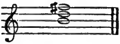
First.



Second.

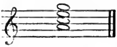


Third.

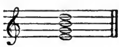


And three minor chords of the seventh founded on these, viz.:—

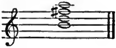
Fourth.



Fifth.

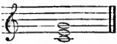


Sixth.

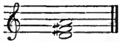


Three major common chords, viz.:—

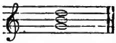
Seventh.



Eighth.

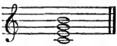


Ninth.

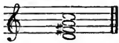


Two chords of the major seventh founded on the first and third of these chords, and one major chord of the seventh founded on the second of them, viz.:—

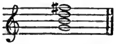
Tenth.



Eleventh.

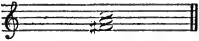


Twelfth.



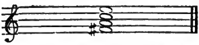
One chord of the false fifth on ♯ F, the sixth degree of the scale.

Thirteenth.



And a chord of the seventh and false fifth founded on this last chord.

Fourteenth.



22. The 4th form of the model minor scale we perceive has

seven chords in common with the 1st form, or its relative, the major model scale. Of the remaining seven chords, six belong to the 2nd form, and one is found in the 4th form only, viz. the chord of the major seventh formed on the major common chord of G, numbered twelve, above.

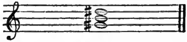
23. It is evident, by inspection, that the 5th form of the model minor scale can have no other chords than what are obtained from the 1st form, or rather from the model major scale.

24. The 6th form supplies no other chords than those obtained in the 2nd, from which it is derived.

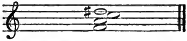
25. The 7th form has all its chords from the 3rd, from which it is derived.

26. The 8th form supplies some chords, not to be obtained from any other form, viz. :—

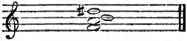
A minor common chord on ♯ G, its third degree.



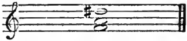
The chord of the augmented sixth with perfect fifth, *on F the second degree.*



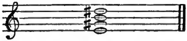
The same chord with major fourth.



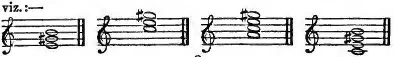
Or with major third, only on its second degree.



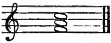
It has also a chord of the major seventh, on E, its first degree.

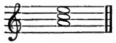


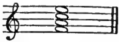
Besides four chords, in common with the 2nd and 3rd form, viz. :—



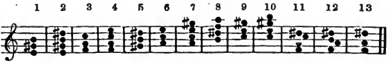
And three in common with the 1st form, viz.—







27. The harmonies of the 8th form are therefore as follows,



being thirteen in all.

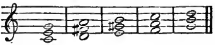
28. The 9th form, being wholly derived from the 5th, has all its harmonies in common with it, these harmonies being transposed when the scale is transposed a fourth higher, i. e., when its origin is on E, and not on B, as in the model form with ♭B.

29. In composition musicians *rarely* confine themselves *to one* form of the minor scale, but make use of several in one and the same piece, employing them by alternation.

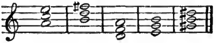
30. But whatever harmonies are employed in compositions in the minor scales, we now see whence they are produced, and can always find by their means the particular scale to which the music may, for the time, belong.

31. We have already seen that in the major scale there are fourteen species of harmony produced from its degrees, and by examining the chords in the foregoing enumerations of harmony in the minor scales of the forms 2nd, 3rd, and 8th, we find *twenty-one* additional chords. The total number of chords is therefore *thirty-five* for all the model scales. These chords are as follows :—

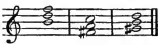
Five major common chords.



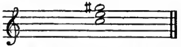
Five minor common chords.



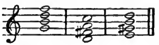
Three chords of the false fifth.



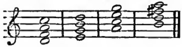
One chord with augmented fifth.



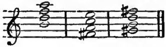
Three major chords of the seventh.



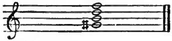
Three minor chords of the seventh.



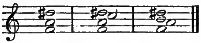
Three chords of seventh and false fifth.



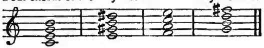
One chord of diminished seventh.



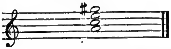
Three chords of the augmented sixth.



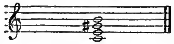
Four chords of the major seventh with major thirds.



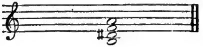
One chord of the major seventh with
minor third.



One chord of the major seventh
with augmented fifth.



One chord of the seventh, with major third and false fifth.



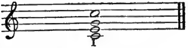
CHAP. XII.

ON THE ESSENTIAL HARMONIES OF THE SCALE.

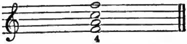
1. Although there are fourteen fundamental harmonies appropriate to the major scale, yet there are only four of them which are considered as the *essential harmonies* thereof.

2. These four essential harmonies are—

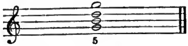
1st. The common chord constructed on the first degree



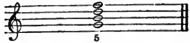
2nd. The common chord, on the fourth degree.



3rd. The common chord on the fifth degree.



4th. The major chord of the seventh, constructed on the common chord on the fifth degree of the scale.



3. These chords contain all the degrees of the scale: for in the chord of C, there are the notes C, E, G; in the chord of F there are the notes F, A. C; and in the chords on G there are the notes G, B, D, F; consequently in the whole of these chords we have the seven notes C, D, E, F, G, A, and B.

4. In musical phraseology,
the first degree of a scale is called the tonic,
the fourth ,, sub-dominant,
the fifth ,, dominant.

5. The common *chord constructed on the first degree* is called the *chord of the tonic.*

The common *chord on the fourth degree* is called the *chord of the subdominant.*

The common *chord on the fifth degree* is called the *chord of the dominant,* and consequently,

The *major chord of the seventh constructed on the chord of the dominant,* is called the *chord of the dominant seventh.*

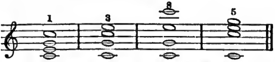
6. With these four chords, every note of the major scale *can*

be accompanied, i. e. whatever may be the order of the single notes of the scale, in the formation of a melody, each note can be harmonized or accompanied by one or other of these chords.

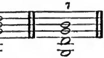
7. Indeed, it is not always necessary to employ the chord of the dominant seventh at all; and some pieces of music are harmonized without the chord of the subdominant, so that the whole harmony consists of the chords of the tonic and dominant. It is also possible to harmonize some pieces of music with the chords of the tonic and subdominant only.

8. The above four chords are selected as being appropriate to the *major* scale, inasmuch as they are all major chords: whereas the remaining fundamental common chords, viz. those constructed on the second, third, and sixth degrees of the major scale, are appropriate to the relative minor scale, i. e. the minor scale of the 1st form.

9. Hence, whenever the first (or its octave) and the third notes of the scale appear in a melody, they can be accompanied by the chord of the tonic; so also can the fifth note (although it is the fundamental note of the chord of the dominant), since it is the fifth to the tonic itself.



10. But when the second and seventh notes of the scale are in the melody, they are accompanied by the chord of the dominant, or the chord of the dominant seventh.



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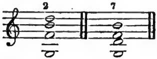
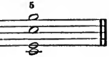


11. The fifth can be accompanied, i.e. harmonized, by either the chord of the tonic, or by the chord of the dominant.



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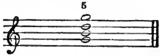

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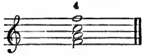
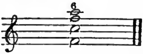
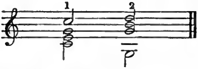
12. And since the fourth and the sixth notes form parts of the chord of the subdominant, they are usually harmonized with this chord when they appear in a musical piece.

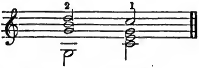




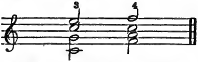
13. So if the first note of the scale be followed by the second, the two harmonies or chords may be as follows :—



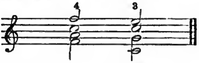
And *vice versa*, if the second of the scale be followed by the first.



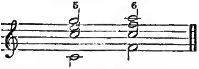
14. Similarly, the third note followed by the fourth may be harmonized thus :—



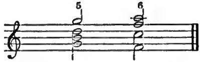
And when they appear in reverse order, thus :—



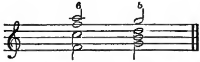
15. When the fifth note of the scale is followed by the sixth, it can be accompanied by the chord of the tonic, and the sixth by the chord of the subdominant.



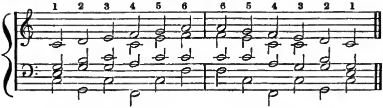
But we also find the fifth harmonized with the chord of the dominant, when the chord of the subdominant follows, thus:—



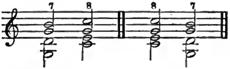
which has a very bold effect in this, and in an inverted progression also.



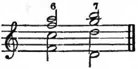
16. The first six degrees of the major scale can therefore be harmonized, in both direct and reverse order, thus:—



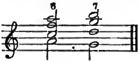
17. When the seventh and eighth degrees follow each other, the seventh takes the chord of the dominant, and the eighth the chord of the tonic.



18. But in passing from the sixth degree to the seventh, it is better to omit the fundamental note of one of their chords,—



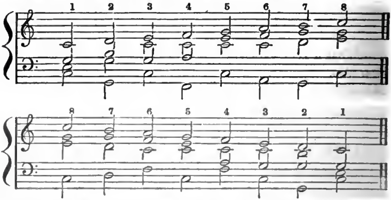
or



and use one of the inverted chords, instead of the common chord itself.

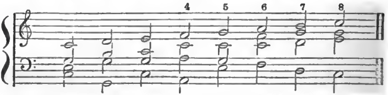
19. The whole scale therefore may be accompanied, as fol-

lows, with the essential harmonies, and with the fundamental notes of each chord in the bass, except on the sixth or seventh degrees, one of which must have an inverted chord.

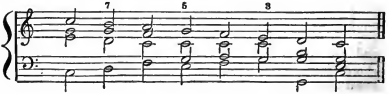


20. In the above examples, the bass notes to all the chords are fundamental notes, except the bass note of the chord which accompanies the sixth or the seventh degree.

21. But it is not necessary that the fundamental note should be the bass note in every chord, and the stiffness, as well as repetition, will be relieved by employing inversions in their stead, especially in accompanying the fourth and fifth degrees ascending (as well as the sixth or seventh, as before observed,)



and in the descending scale, the third, fifth, and seventh may be harmonized with inverted chords.



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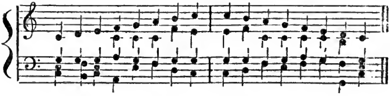
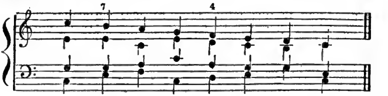
22. Thus far, we see how the notes of the scale may be accompanied or harmonized with the fundamental major common chords only. But another variety of harmony may be introduced, by using the chord of the dominant seventh on the second and seventh degrees, both ascending and descending.

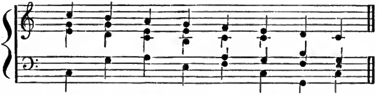


23. But if we are allowed to employ one or more of the minor common chords, or their inversions, in harmonizing the degrees of the major scale, we shall have a still further variety of chords, and afford more gratification to the ear by the mixture of major and minor harmonies, than when the harmony is of one kind only.

24. Now we can accompany the second, third, and sixth degrees of the scale with the minor chords constructed on them as fundamental notes, or with one of their inversions, and this perhaps with most advantage in the descending scale, for then the seventh note can be harmonized with the minor chords of the third (E), and the fourth by the minor chord of the second degree.

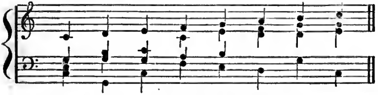


25. By this mixture of major and minor chords, the ear discerns a mixture of major and minor scales, and this will be felt more strongly if we employ the minor chord of the sixth degree as an accompaniment to the sixth, and the minor chord of the third as the accompaniment to the fifth.



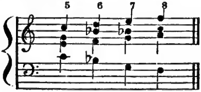
Here we have the fundamental note in the bass of every chord.

26. Moreover the sixth note belongs to the minor chord on the second degree, which chord may therefore accompany the sixth in the ascending order.

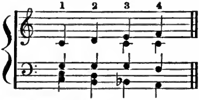


And here also we get a fundamental note in the bass of each chord, so that if the music be of a peculiar character, such as we often meet with in the writings of the sixteenth and seventeenth centuries, we can harmonize any degree of the major scale with chords having their fundamental notes in the bass, and this as well in the ascending order as the descending.

27. But because the first four degrees of the scale constructed on C, (C, D, E, F,) are identical with the last four of the scale on F, (Div. II., Chap. V. § 19,) and therefore may be considere as belonging to this latter scale, we may harmonize the first, second, third, and fourth degrees of the scale C, with such chords as belong to the fifth, sixth, seventh, and eighth degrees of the scale F, viz. thus :—



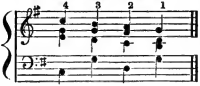
Or we may mix this harmony of the scale F with that of the scale C, by giving to the note D the chord of G (the fifth of the scale C,) and to the note E, the third to C, the chord of the dominant seventh in the scale F, in the third inversion.



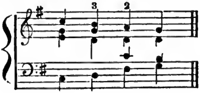
In the first of these examples, the note D, the sixth of the scale of F, is accompanied by the common chord ♭ B, and the note E, the seventh, is accompanied by the first inversion of the chord of the false fifth, E, G, ♭ B.

In the second example, the same note E, as the third to C, has the third inversion of the chord of the dominant seventh in the scale F (C, E, G, ♭ B) for its accompaniment.

28. Again, the first four degrees of the scale constructed on G (G, A, B, C; Div. II. Chap. V. § 12,) are identical with the fifth, sixth, seventh, and eighth degrees of the scale on C. Hence, if we consider these notes as belonging to the scale G, and apply the preceding rules for the descending scale (see ex. in § 25), they can be harmonized thus :—



Or if inversions of chords are preferred, we can put D, the second inversion of the chord of G, instead of G for the bass, in the accompaniment to the note B in the upper part, and put ♯F in the bass in the chord of the dominant seventh which accompanies A the second degree ; thus :—



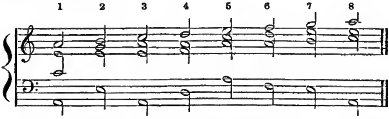
29. We perceive that not only do the degrees of a scale belong to some other scale, viz. one of its nearest related scales, but the harmonies of these scales may be applied to them, as well as those of the scale to which those other scales are related.

30. Hence, unless we have the whole scale presented to us in a melody, and in such a manner that the succession of the degrees fixes the scale so decidedly that the ear cannot be in doubt, it follows that there is always a certain ambiguity, which can only be decided by the species of harmony with which the notes are accompanied.

31. This applies as well to minor scales as to major. For example, the notes of the model minor scale of the 1st form cannot be distinguished from those of the model major scale; but we know the one from the other when we see the whole scales, for the one begins and ends with C, the other with A.

32. Now the common chords constructed on the first, fourth, and fifth degrees of the 1st form of the model minor scale are *minor;* consequently, the chord of the seventh, constructed on the chord of the fifth (E) is a *minor* chord of the seventh, i. e., it cannot be a chord of the dominant seventh.

33. Consequently, employing no other harmonies than such as are obtained from the three common chords, on the first, fourth, and fifth degrees of Form 1st, the scale must be harmonized in a manner somewhat like the following. (Compare with the example in § 19.)



34. In certain parts of this harmony there is much quaintness, not to say roughness, and the ear is not so well satisfied as with the harmonies of the major scale. The unpleasantness is

most felt in the chord of the fifth, i.e. the chord on E, and this merely because the chord is minor.

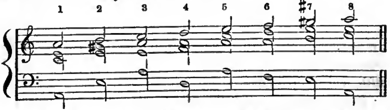
35. Now musicians have determined that every *dominant* chord shall be *major*, and, moreover, that the fifth degree only shall be the fundamental note of a dominant chord, but we cannot have a major chord on E, the fifth of the above form of the minor scale, because there is no ♯ G, i. e. the seventh of the scale is minor, G, instead of ♯ G.

Consequently, we must either harmonize the 1st form according to some other rule, or borrow some harmony from some other scale.

36. We see clearly that we can harmonize this form with the same chords with which the major scale, from which it is derived, is accompanied (see ex. in § 16); and some kinds of music actually require this harmony, but it belongs to too severe a class of music to be generally admired.

37. From what has just been said, we find that in order to obtain a chord with a major third, constructed on the fifth degree of the minor scale, this fifth must belong to the Forms 2nd and 3rd, (Div. II., Chap. IV. §§ 8, 9,) for these have ♯ G, the major seventh of the scale, which is the major third to E, the fifth of the scale.

38. The scale of the 3rd form can be harmonized with the minor common chord on its tonic or first degree; the minor common chord on its subdominant or fourth degree, and the dominant chord, or chord of the dominant seventh, according to the rule for the major scale in § 19.



Which may be modified by employing inversions in the bass, giving the fifth its own major common chord, and using the dominant seventh in the second and seventh degrees.

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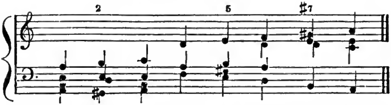
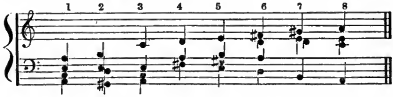
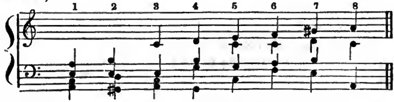


39. Hence this form of the minor scale admits of only *one* major chord, and if we desire to use more major chords we must borrow them from a major scale, or from some other form of minor scale which has some other major chord. This other minor scale is Form 2nd, which admits of a major chord on its subdominant, as well as on its dominant, and can therefore be harmonized as follows :—



40. But Form 2nd admits of only two major chords ; and if any others are required they must belong to the major scale.

41. Form 3rd is very frequently harmonized in the following manner,—



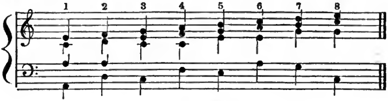
In which not only variety, but vigour also, is obtained by the three major chords, C, G, and F, which accompany the fourth, fifth, and sixth degrees.

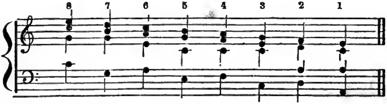
42. Hence we see that the minor scale can be harmonized by a mixture of major and minor chords, as well as the major scale, and that both are thereby more pleasing to the ear.

43. With respect to the 4th form, it is absolutely necessary to

employ this mixture of minor and major chords, for, like the 1st form, it has no dominant chord, nor chord of the dominant seventh. But it may be truly said, that in musical compositions there is in general an alternation of these four forms in the course of the piece, and they afford musicians a very desirable variety both of melody and harmony.

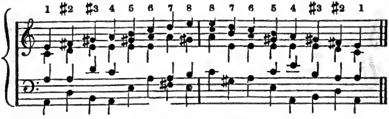
44. The 5th form commands very bold harmonies; it may be considered as an intermediate scale between major and minor, partaking of both characters. Its degrees admit of the following harmony.





There is a very noble and ecclesiastical character in this scale, and such harmonies as are here employed are eminently fit for solemn sacred music.

45. The 6th form may be harmonized with such chords only as are obtained from its own degrees, in the following manner :



46. This form is found employed alternately with one or more

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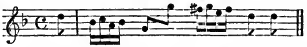
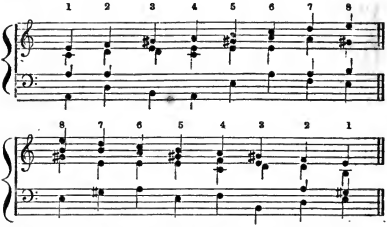
of the first four forms. It is found in the works of all the great musicians, Handel, Haydn, Mozart, Purcel. J. S. Bach makes use of it at the commencement of one of his organ fugues, in the following manner.

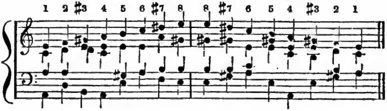
Form 6th, seated on D.



47. Form 7th is more frequently met with than either the 5th or 6th forms ; its degrees admit of the following accompaniment.



48. Form 8th belongs entirely to the modern school of music. Its harmony accompaniment, found within itself, is as follows :—



49. This scale is much more dependent, weak, and awkward than either of the Forms 5th, 6th, and 7th ; but it is neverthe-

less a great favourite with the modern operatic writers, who employ it in alternation with the Forms 1st, 2nd, and 3rd.

50. The 9th form admits of no other chords than those found in the fifth, to which it wholly belongs.

51. From the foregoing analysis of the harmonies by which to accompany a piece of music in any scale, it appears to be left entirely to the choice of the composer which form of the minor scale he will select his chords from, and he may use such of the twenty-one chords, derived from all the forms collectively as suit his purpose: moreover, he can alternate these with the fourteen chords belonging especially to the major scale. (§ 31 in Chap. X.)

CHAP. XIII.

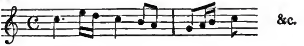
ON MODULATION—TRANSPOSITION—CADENCES.

1. We perceive by the examples given in the articles, §§ 27, 28, Chap. XII, that an additional pleasure is imparted to the ear by varying the accompaniment to certain notes of the scale, i. e. by introducing the essential harmonies of a relative scale, or those parts which are common to two scales.

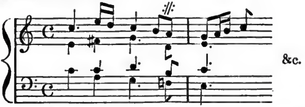
2. Whenever this introduction of the harmony of a scale which is not the one in which the music we are harmonizing is written, takes place; i. e. when the essential harmonies of one scale are set aside, and those of another are employed, this change is called Modulation.

3. The modulation from one scale to another may take place in any part of a composition; at the very commencement, at the middle, towards the end, or between these points, at the pleasure and convenience of the composer. Thus Jos. Haydn in the first measure, and in the second portion thereof, introduces the harmony of the dominant seventh in the scale G, in

a composition otherwise written in the scale C. The melody is as follows :—

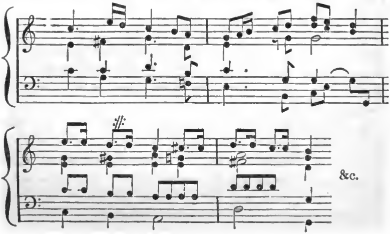


and it is harmonized thus :—



by introducing a *temporary* modulation into the relative scale, and returning to the scale C, by means of the chord of the seventh and imperfect fifth, at the last quaver of the measure at the mark ://:.

4. This early modulation, out of one scale into its relative major, and the return into the first, does not indicate a necessity. For the same master, in the composition quoted, in a repetition of the above phrase, does *not* continue this harmony of the original scale during two whole measures after the return thereto; but proceeds to modulate into the relative minor scale of Form 3rd, with ♯G; as seen at the mark ://:, over the second portion of the third measure of the following example.



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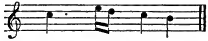
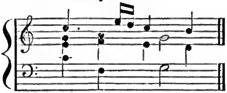
The modulation into this minor scale is made by the chord of the dominant seventh on E, in its second inversion, and as soon as this modulation is perfected by the resolution of the discord into the minor chord of A, there is an instant modulation into the harmony of the major scale D, which is the relative to G, into which scale the composition at last settles, and continues forth for a considerable time.

5. Such transient modulations as the above are considered by some writers as modulations *within* the original scale (or scale in which the piece commences), because the melody itself does not quit this scale. But in order to know what scale a piece of music belongs to, it is evident we must look at the *whole structure* of the parts constituting the harmony; for the melody itself is one of these parts, and it would be scarcely correct to say one of the constituent parts of a chord belongs to one scale, and the remaining parts to another.

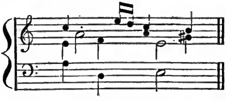
6. It follows, therefore, that the scale in which a composition is really written cannot properly be decided until the harmony is exhibited. A melodic phrase may be harmonized in several scales. For example, the phrase in § 4.



may be harmonized in the major scale C.



Or in the minor scale A, Form 3rd.



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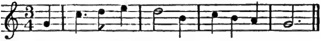
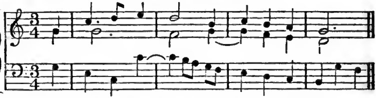
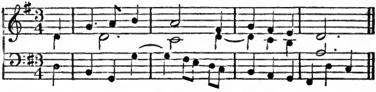
7. If in any case there is required merely a change of position of a scale, this is not modulation, but transposition of the essential harmonies of the scale into a new position. For example, the following musical phrase in the model scale C,



when harmonized in this position appears thus :—

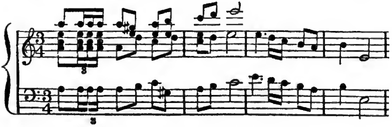


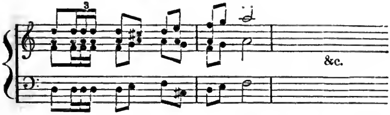
And if we simply transpose the whole to some other position, higher or lower, such, for example, that G shall be the tonic instead of C, the phrase and its harmony will appear as follows:



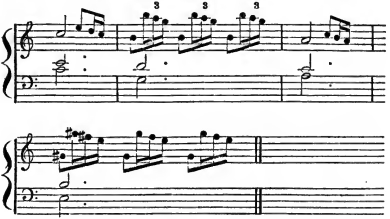
And we may go on transposing this through all the fifteen major scales *without* modulation.

8. The following is an example of transposition taken from the beginning of Weber's beautiful overture to the opera Preciosa, and it is very effective. The phrase consists of two measures in the minor scale on A, and is repeated immediately in the same transposed to D.



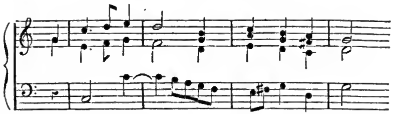


So also the following transposition, from the major scale C to the minor scale of Form 6th, is found in the same composition.



9. These are not modulations from one scale to another, but mere transpositions of melodic phrases from scale to scale; for when a real modulation does take place, it must be made by means of the essential harmony of the new scale, be it major or minor.

This mode of changing the scale is indicated by introducing the chord of the dominant, or of the dominant seventh, in the *new position.* For example, the foregoing phrase (§ 7) is made to "modulate" out of the scale C into the scale G by means of the chord of the dominant seventh formed of the notes D, ♯F, A, C, of which the note D is the dominant (or fifth) of the (new) scale G. Thus :—



10. When a modulation is made from one scale to another, or from one position of a scale to another; it is done by *announcing the new position of the dominant harmony;* whether this harmony be the common chord of the new dominant, or the chord of the (new) dominant seventh.

11. But although the new position of the dominant harmony announces the new position (or change) of the scale, yet the scale itself is *not decided* until the chord of the new tonic, or initial note, is produced.

12. Hence in all modulations from one scale to another, or from one position of a scale to another, the dominant harmony should be followed by the chord of the tonic.

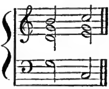
13. These two harmonies, of the dominant and tonic, form what is called a *cadence.*

14. It follows therefore that there are as many cadences as there are positions of all the scales. But this relates chiefly to the fifteen major scales, and the same number of positions of the first four forms of the minor scale.

15. The following example contains the fifteen cadences in the major scales, made by the chord of the dominant, and the chord of the tonic.

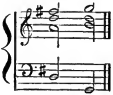
Scale C.

1.



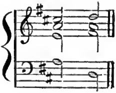
Scale G.

2.



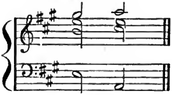
Scale D.

3.



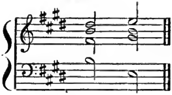
Scale A.

4.



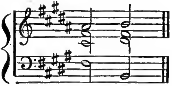
Scale E.

5.



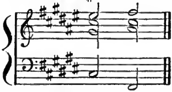
Scale B.

6.



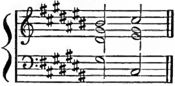
Scale ♯ F.

7.



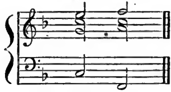
Scale ♯ C.

8.



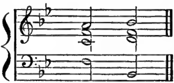
Scale F.

9.



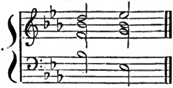
Scale ♭ B.

10.



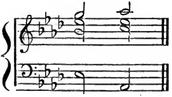
Scale ♭ E.

11.



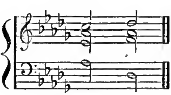
Scale ♭ A.

12.



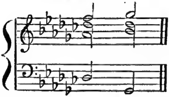
Scale ♭ D.

13.



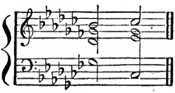
Scale ♭ G.

14.



Scale ♭ C.

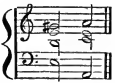
15.



16. The cadences for the 2nd and 3rd forms of the minor scale (being one and the same for each form,) are as follow, in fifteen positions.

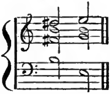
Scales A.

1.



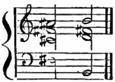
Scales E.

2.



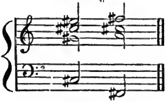
Scales B.

3.



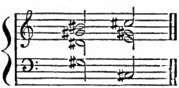
Scales ♯ F.

4.



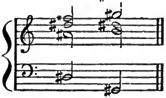
Scales ♯ C.

5.



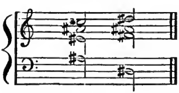
Scales ♯ G.

6.



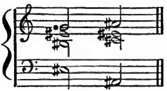
Scales ♯ D.

7.



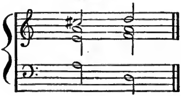
Scales ♯ A.

8.



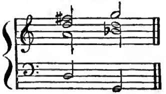
Scales D.

9.



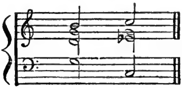
Scales G.

10.



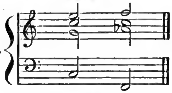
Scales C.

11.



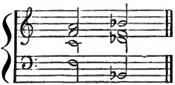
Scales F.

12.



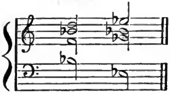
Scales ♭ B.

13.



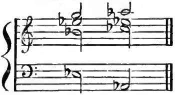
Scales ♭ E.

14.



Scales ♭ A.

15.

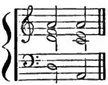


17. All the foregoing cadences may be made by means of the chord of the dominant seventh, by merely adding the seventh to the chord of the dominant. (See Chap. IV.)

18. The 1st form of the minor scale has a cadence made by the chord of the subdominant (fourth of the scale) followed by the chord of the tonic, thus :—

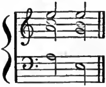
Scale A.

1.



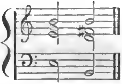
Scale E.

2.



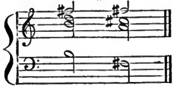
Scale B.

3.



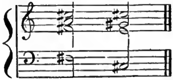
Scale ♯ F.

4.



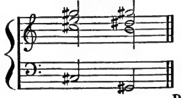
Scale ♯ C.

5.



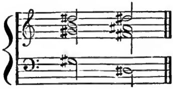
Scale ♯ G.

6.

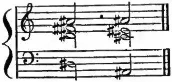


Scale ♯ D.

7.

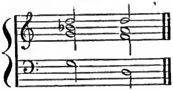


Scale ♯ A.



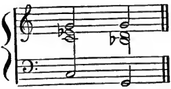
8.

Scale D.



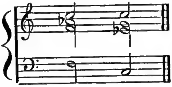
9.

Scale G.



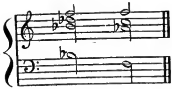
10.

Scale C.



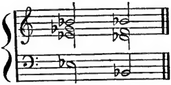
11.

Scale F.



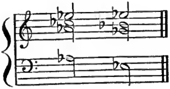
12.

Scale ♭ B.



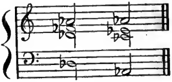
13.

Scale ♭ E.



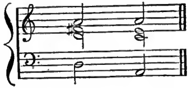
14.

Scale ♭ A.



15.

19. The 4th form admits a cadence similar to the last, but with this difference, the chord on the subdominant is major instead of minor.

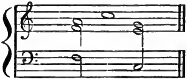


20. All cadences formed by the chord of the subdominant, followed by the tonic, as in the above examples of the 1st and 4th forms of the minor scale, belong peculiarly to the ancient church style of composition.

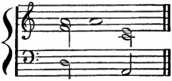
21. In major scales also, cadences are made by the subdominant and dominant chords, as above; and indeed, whenever a particular solemnity is required at the close of a piece of music, this kind of cadence is the best for every scale which will admit of it.

22. Hence we obtain the following form of this cadence from the chord of the subdominant to that of the tonic.

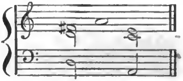
Major Scale.



Minor Scale, Forms 1st and 3rd.

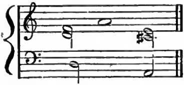


Minor Scale, Forms 2nd and 4th.

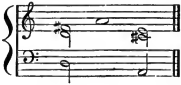


23. In ancient church music, and music of a solemn religious character, we frequently find the tonic chord major, although the scale is minor, thus introducing, as it were, the major scale, at the very last moment; and the effect is very fine.

Forms 1st and 3rd.

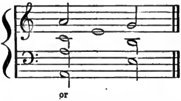


Forms 2nd and 4th.

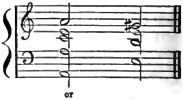


24. The 5th, 6th, 7th, and 8th forms all admit of cadences formed by the chord on the fourth of the scale, followed by the chord on the first degree of the scale.

Form 5th.

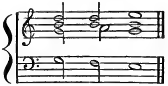


Forms 6th, 7th, 8th.

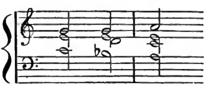


25. Besides the above cadences, there are the following belonging to the 5th and 7th forms.

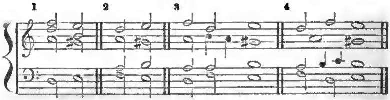
Form 5th.



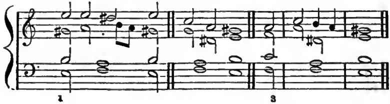
Thus by Mozart (a fourth higher or a fifth lower.)



Form 7th.

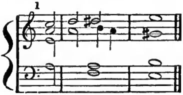


26. The following are similar cadences belonging to Form 8th.



27. The cadence of Form 5th is sometimes turned into the above cadence of the 8th form, and with good effect in some kinds of composition.

1



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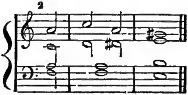


DIVISION IV.

PRACTICAL MUSIC.

CHAP. I.

ON THE DIFFERENT SPECIES OF COMPOSITION—COUNTERPOINT.

1. A MUSICAL composition may be so constructed as to require only one voice or instrument for its performance, and such compositions are called solos. If the solo be for an instrument capable of producing only *one* sound at a time, such as the human voice, the flute, clarionet, horn, trumpet, &c. &c. the composition is said to be *written in one "part."*

2. But when there is more than one voice or solo instrument required, the music is said to be written in two, three, four, or more "parts," according to the number of voices or instruments required to produce, at the same instant, the constituent sounds of the harmony, including the leading melody itself.

3. In this manner we have duetts for two, trios for three, quartetts for four, quintetts for five, sestetts for six, septetts for seven, &c. &c. solo instruments.

4. Hence we have as many "parts" in a composition as there are solo instruments required for its performance, since each instrument will have a particular part assigned to it.

5. But since we can have only three different notes (or sounds) in a common chord, it would appear that in general the number of parts cannot exceed three, yet, by adding the octave to the fundamental note, &c., we can have four "parts," and at the same time enrich the harmony, as well as

perfect the number of parts required for a fully harmonized composition.

6. A composition in four parts enables us also to use the chords of the seventh, both major and minor; and as, in the free or modern ideal style of composition, these chords are of frequent occurrence, it is really necessary to construct all compositions for several instruments in *four* parts.

7. And hence it is that even songs require sometimes a pianoforte accompaniment, written in full harmony of four parts.

8. When the number of parts exceeds four, it is evident that several notes of a common chord must be doubled either in the unison or octave, and that at least one of the notes constituting a chord of the seventh must also be doubled, so that no harmony can consist of more than four parts, except occasionally when a chord of the seventh and ninth can be introduced, in which case the number can be increased to five. But chords of the seventh and ninth occur but rarely in any composition.

9. It follows, therefore, that whatever number of voices or instruments (or of both together) is required in the performance of a musical composition, the whole mass of harmony produced is reducible to *four* parts, or at most *five*.

10. There are two styles of musical composition, called the *strict* and the *free*. In the former style no use is made of any chord consisting of four or more notes, i. e. the chords of the major and minor sevenths; of the seventh and false fifth; seventh and ninth; nor any inversion of these is employed, otherwise than as they occur in passing, or transiently introduced discords.

The free introduction of discords without preparation constitutes the principal characteristic of the Free Style. Nevertheless, all kinds of *prepared* discords are employed in the strict style, and amongst these the second inversions of major and minor common chords are to be reckoned, for in this style of composition, the fourth (in any chord) is considered as a discord, and as such *must be prepared.*

The chord of the diminished fifth, consisting of three notes only, is admitted in the strict style, and treated as a common chord.

11. The strict style of composition is that which is most proper for ecclesiastical purposes, and is at the same time so simple and perfect, that any one who can compose a piece of music therein, can, with little or no difficulty, compose in the free style.

12. The best writers on practical music and composition have shown that the harmony of any musical piece whatever may be constructed in five different ways, or in other words, there are *five species* of composition. The *first* consisting of *one note* only in each accompanying part (whether the composition be in two or more parts) to each note of the melody (or, as it is usually called, the *subject*) to be harmonized. The *second* consisting of two; the *third*, of four (or eight) notes to each note of the subject. The *fourth species* consists of syncopated notes, or suspensions both of concords and discords. The *fifth species* is made up of all the preceding four mixed together.

13. In the *first species* of composition it is manifest that no discords whatever, nor the *second inversion* of any common chord (or chord of the fourth and sixth) can be employed. For since each note of the accompaniment is equal to each note of the subject, there can be no preparation and resolution of discords, and unprepared discords (chords of the seventh, &c.) are not admissible at all in simple composition, i. e. in composition in the strict style.

14. In the *second* and *third species* discords are admitted as *passing notes* only, i. e. as notes leading from one concord to another, not as belonging to a chord, and therefore not requiring preparation. Moreover, these passing notes occur only on the *unaccented* portions of the measures, and not on the accented, in which there must be concords only.

15. The *fourth species* admits prepared discords, and consonant suspensions, but it does not allow modulation, either sudden or digressive.

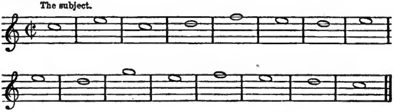
16. The *fifth species* admits all kinds of prepared discords,

consonant suspensions, and of two, four, or eight notes to any note of the subject, in any measure; or the measure may be made up of any number of notes not exceeding eight.

17. It is to be observed, that in speaking of two, four, or eight notes in the accompaniment, *duple* time is signified. If the composition be in *triple* time, there may be three or six notes to each note of the subject.

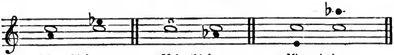
18. The best method of exercising ourselves in the art of musical composition is to choose a "subject" consisting of *notes of equal duration* (whether of semibreves, minims, &c. or of dotted notes) each note occupying a whole measure. Such a subject is usually called a *plain chant* (in German, choral), and it may consist of as many notes, or measures, as we please; but a few, say sixteen, will be sufficient for early purposes.

19. Let us therefore assume the following melody, written in duple time, for

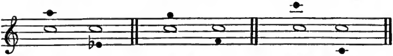


which we will proceed to harmonize in two, three, four, and five parts, in the five species of composition, and in this order, beginning with the first species in two parts.

20. But it will be very useful first of all to examine the number of notes which form concords with any given note, C for example. This note forms the concord of a minor third, with A below it and ♭ E above it; a major third with E above and ♭ A below it; a minor sixth, with E below and ♭ A above it; a major sixth, with A above and ♭ E below it; a perfect fifth, with G above and F below it; and an octave, with C above and below it. In all, twelve concords.



Minor thirds. Major thirds. Minor sixths.

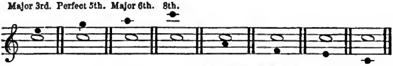


Major sixths. Perfect fifths. Octaves or eighths.

21. But if we confine the number of concords to those which a given note makes with such other notes only as belong to the same scale, it is evident that these concords must be such as belong to those common chords, of which the given note itself is a constituent part.

22. Assuming, therefore, our subject to be in the major scale C, the note C thereof, reckoning upward, makes concords with E, G, A, and its octave note C; being respectively a major third, perfect fifth, major sixth, and eighth, it also makes a minor third with A, a perfect fifth with F, a minor sixth with E, and an eighth with C, below it.

Major 3rd. Perfect 5th. Major 6th. 8th.



Minor 3rd. Perfect 5th. Minor 6th. 8th.

being eight concords in all.

23. In a like manner it may be shown that the second, third, fourth, fifth, and sixth notes of the major scale make, each of them, eight concords with other notes belonging to the scale. But the seventh note cannot form a perfect fifth with a note above it belonging to the same scale. B, for example, has no perfect fifth above it in the scale C (or its relative scale, A minor, Form 1st), since its fifth, F, is distant from it only a diminished fifth.

24. Hence in composition in the strict style, in three or more parts, the chord of the diminished fifth is considered as a common chord, to enable us to accompany the seventh note of the

major scale, *when the melody or subject is in the bass* or lower part.

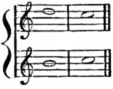
25. It follows, from what has just been considered, that the seventh note of the scale forms only five concords with other notes belonging to the scale. B, (the seventh in the scale C,) for example, forms a minor third with D above; and a minor sixth with G above it; a major third with G below; a perfect fifth with E below; and a major sixth with D below it. It is true it forms the concord of the eighth with both its octave notes; but as the seventh note of the major scale most generally proceeds by gradation to the eighth, this note is never accompanied with its octave, and hence in the chord of the diminished fifth, either the third or the fifth is doubled in music in three or four parts. The eighth can be employed where the number of parts is greater than four.

26. Rules for the progressions of concords, &c. have already been given, as well as those for preparing and resolving discords, together with consonant and dissonant suspensions, in former Chapters. These rules must, of course, be strictly observed in composition in any number of parts.

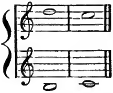
27. After what has been said above, it is only necessary to observe that in all cases the accompaniment must commence with a perfect concord in one of its parts in the strict style of composition, so that we must always have the octave, or the octave and fifth in music in four parts; but the fifth should not appear *without the third*, nor be lowest at the commencement, or uppermost at the conclusion of the piece, in simple composition, in which the number of parts does not exceed four.

28. The following cadences belong to the first species of composition in two parts:

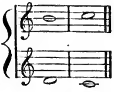
First.



Second.

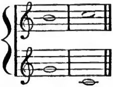


Third.

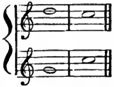


With these every composition in the strict style, in two parts, should be terminated, although we sometimes meet with a cadence made from the fifth note of the scale.

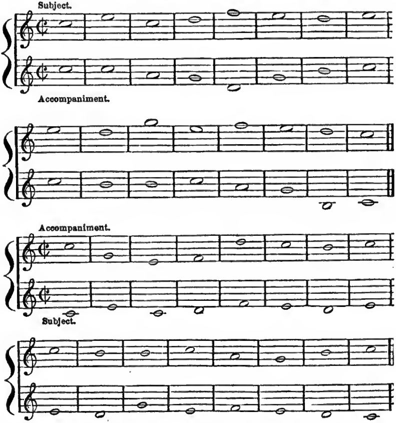
thus:



or

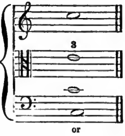


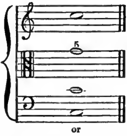
Example of the *first species* of composition in *two parts.*



29. It is evident that if we wish to add a third part to the above, it must be such that the additional note in each measure

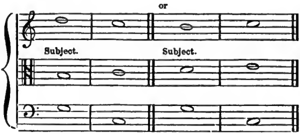
is the remaining note of the common chord, or chord of the false fifth, except when the octave notes occur; when the additional note should be the third to the lower or bass note, in preference to the fifth thereto.

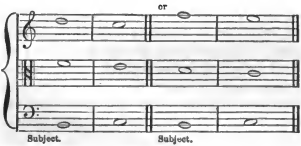
thus:—


not thus:—


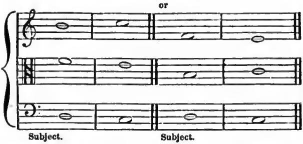
Hence, when the third has been already used, the additional part is the fifth or the octave; and if the sixth has already been employed, the added part is either the third or the eighth.

30. The terminal chords or cadences for the first species of composition in three parts are made as follows: namely, by the chords of the dominant and tonic.

Ex. 1.


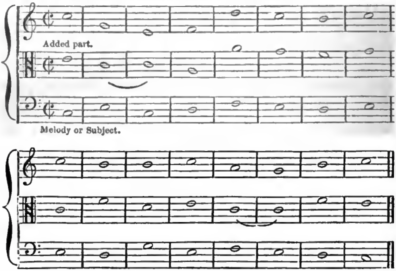
Ex. 2.


Ex. 3.



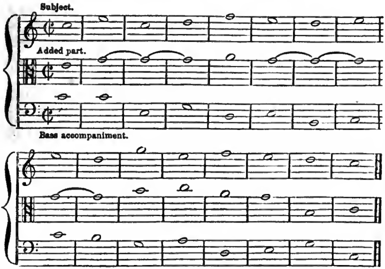
The first of these cadences is employed when the subject is in either the upper or middle part : the second and third cadences are used when the subject is in the bass part.

31. Example of the *first species* of composition in *three parts.*

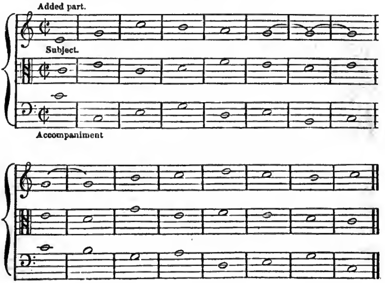


In the above example the melody, or subject, is placed in the bass, and by this means the groundwork of the harmony of the whole piece. This method is the most preferable ; for, having harmonized the melody in this position, there is very little difficulty in harmonizing it in any other.

Example 2. of the first species of composition in three parts, the subject being in the treble part, the accompaniment in the bass, and the added part in the alto.



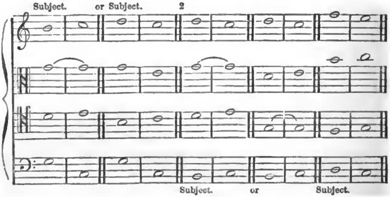
Example 3. of the first species of composition in three parts. The subject being in the alto part, the accompaniment in the bass, and the added part in the treble.



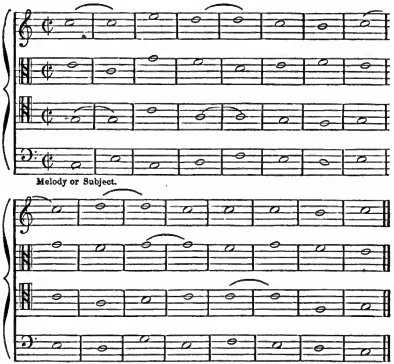
In the foregoing examples of composition in three parts, the alto staff is employed to denote the middle part; but this part could have been written on the tenor staff, or even on the treble staff, but it is most useful for a beginner to write the parts on different staves, and accustom himself to their use at once; for no 'part music' can be well exhibited without the employment of the 'mean staves.'

32. In the *first species* of composition in *four parts*, it may be necessary sometimes to double the third, fifth, or octave, in common chords; and also the third, or sixth, or octave to the bass note, in the first inversions thereof, for the purpose of making the parts move smoothly. Moreover, in the chord of the diminished fifth, it is better to double the false fifth itself in all cases.

33. The cadences, or terminal chords, for the *first species in four parts*, are as follow, and they are written on four staves, viz. treble, alto, tenor, and bass, for the purpose of exhibiting the subject and the proper motion of the parts, as well as their position.

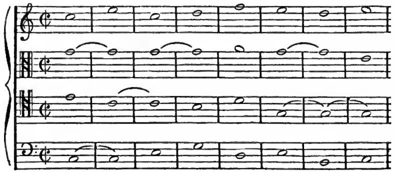


Ex. 1. First species of simple composition in four parts; the melody being in the bass.



34. It is not at all necessary that the 'middle' parts, in the alto and tenor, should be so disposed that the alto is *always* above the tenor; they may 'cross' each other occasionally, when the melodies of these parts require it; i.e. the alto part may descend below the tenor.

Ex. 2. First species of simple composition in four parts; the melody being in the treble part.



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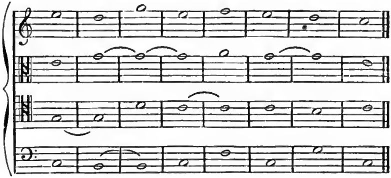
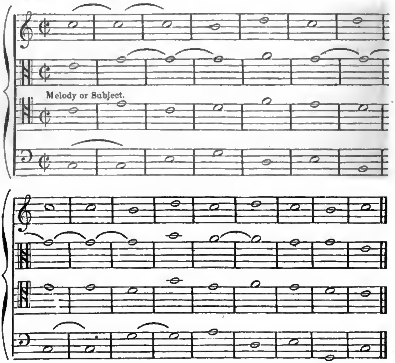
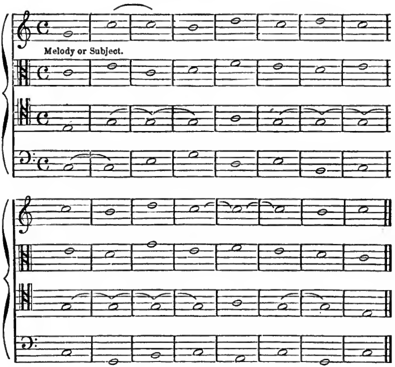


Ex. 3. First species of composition in four parts; the melody being in the tenor part.



Ex. 4. First species of composition in four parts; the melody being in the alto part.



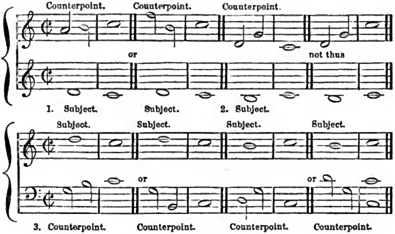
35. The first species of composition is that which was employed by the earliest harmonizers of the melodies, or plain chant of the ancient church: and as it consists of only one note in the accompanying parts, to every note of the subject, it was called by our forefathers 'counter point' (*contra-punctum* in Latin); because the notes were simply round points, placed one opposite the other—note against note.

36. It has ever since been the custom to consider the principal accompanying part of harmony as the *counterpoint;* and therefore in the remaining species of composition, the counterpoint is that part, accompanying the subject, which exhibits the peculiarity of the species. For 'composition,' the word counterpoint will now be used.

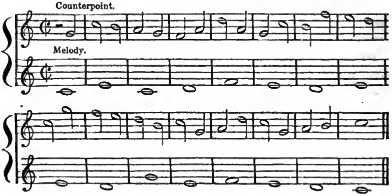
37. The second species of composition, or *counterpoint,* consists of two notes of equal duration (in duple time) in the

counterpoint to every note of the subject. In this species the second note may be a discord of transition, i.e. a discord passing from one concord to another. The first note in the measure must be a concord; or in other words, the accented portion of the measure must have a concord. Moreover, the discords of transition must proceed gradually, and not by skips, for this would render the counterpoint unpleasing.

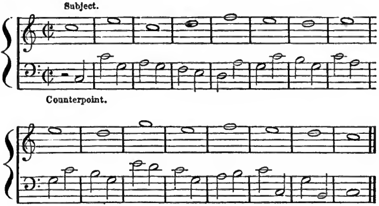
38. The cadences, or terminal chords for the second species of counterpoint in two parts, are formed as follow :—



39. Example 1. of the second species of counterpoint in two parts; the subject being in the lower part.



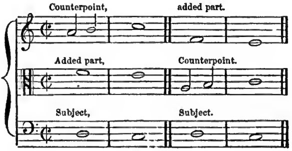
40. Example 2. of the second species of counterpoint in two parts; the subject being in the upper part.



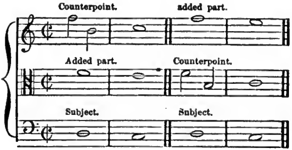
41. In both these examples the counterpoint is made to commence in the unaccented portion of the measure, this is done to make the motion of the parts uniform, and thereby more pleasing. Moreover, the first example has the counterpoint commencing with the concord of the perfect fifth. This fifth is good at the beginning, but must be avoided at the ending of a composition, although it may occur in other places, as well as at the commencement.

42. The cadences for the second species of counterpoint in *three parts* are formed in the following ways.

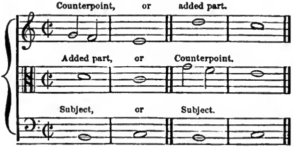
Ex. 1.



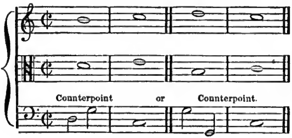
Ex. 2.



Ex. 3.

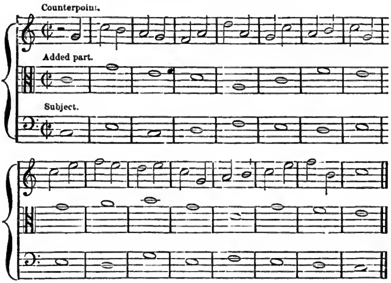


Ex. 4.

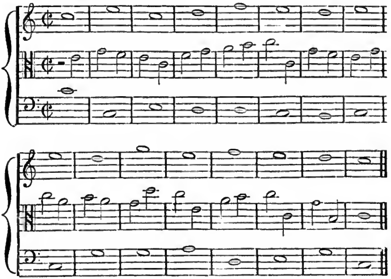


In the fourth example either of the upper parts may form the subject, the other being the added part, the counterpoint being in the bass.

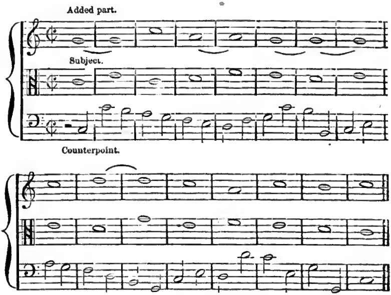
43. Example 1. of the *second species* of counterpoint in *three* parts; the melody being in the bass; the counterpoint in the treble, and the alto being the added part.



Example 2. of the *second species* of counterpoint in three parts ; the subject being in the treble, the counterpoint in the alto, the bass forming the foundation of the harmony, and not a mere added part.

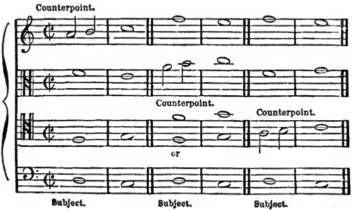


Example 3. of the *second species* of counterpoint in three parts; the subject being in the alto part, the counterpoint in the bass, and the third, or added part, in the treble.

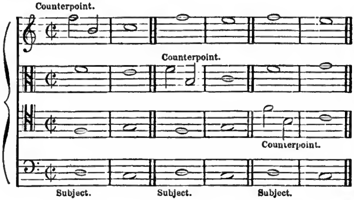


44. The cadences for the *second species* of counterpoint in *four parts* are formed from those employed in the second species in three parts, by the addition of a fourth part.

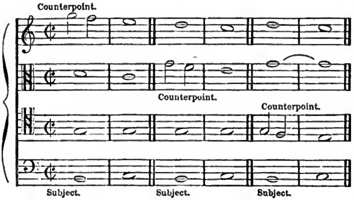
Ex. 1.



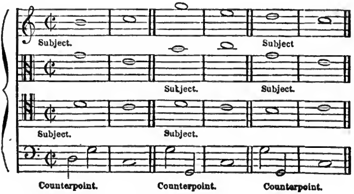
Ex. 2.


Counterpoint.
Counterpoint.
Counterpoint.
Subject.
Subject.
Subject.

Ex. 3.

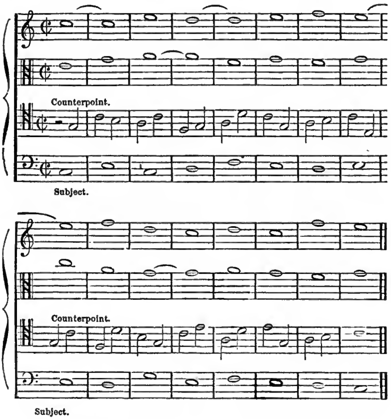

Counterpoint.
Counterpoint.
Counterpoint.
Subject.
Subject.
Subject.

Ex. 4.

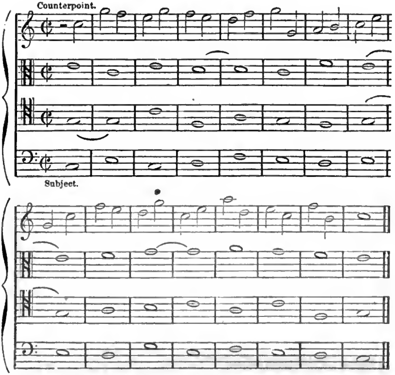

Subject.
Subject
Subject.
Subject.
Subject.
Subject.
Counterpoint.
Counterpoint.
Counterpoint.

In the fourth example the subject may be in the upper part, or either of the middle parts, the counterpoint being in the bass.

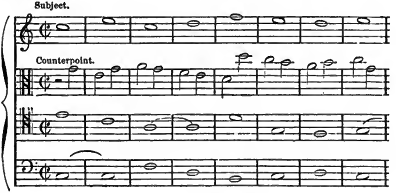
45. Example 1. of the *second species* of counterpoint in four parts; the melody being in the bass, and the counterpoint in the tenor part.

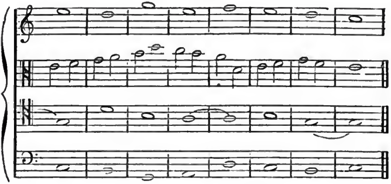


46. The counterpoint may be put in the treble or alto part, as well as in the tenor, and make useful exercises thereof, as may be shown in the following example, containing the counterpoint in the treble part.



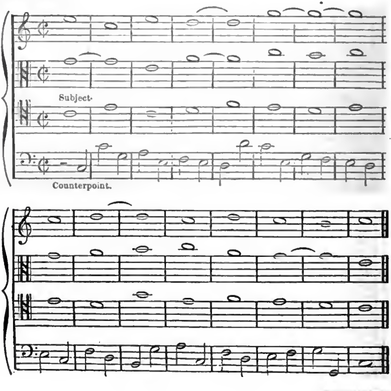
Example 2. of the *second species* of counterpoint in four parts ; the subject being in the treble, and the counterpoint in the alto part.



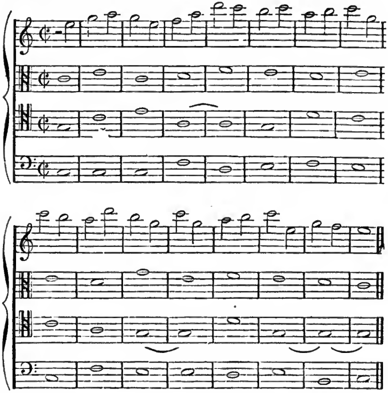


In this position of the subject we may compose a counterpoint in either of the other parts, and multiply examples; but it will be useful to the student to leave this for his own practice.

47. Example 3. of the *second species* of counterpoint in four parts; the melody being in the tenor part, and the counterpoint in the bass.



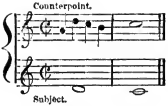
Example 4. of the second species of counterpoint in four parts; the subject being in the alto part, and the counterpoint in the treble.



48. The *third species of counterpoint* consists of four notes in the counterpoint to each note of the subject. In this species there must be a *concord* in the accented portion of the measure, in the unaccented portion there may be such discords as lead to the next concord; i. e. the second, third, and fourth notes need not be concords with the bass, or subject; but they may be discords of transition, passing by gradation, and not skips, from one concord to another.

49. The following cadences are employed in the third species of counterpoint in two parts.

1.



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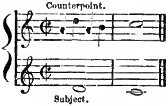

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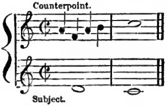

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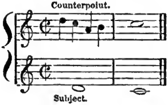

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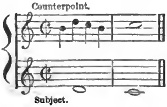
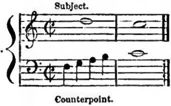


6.



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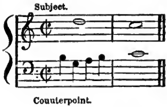

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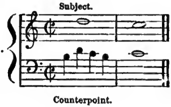

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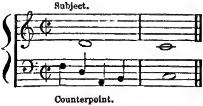
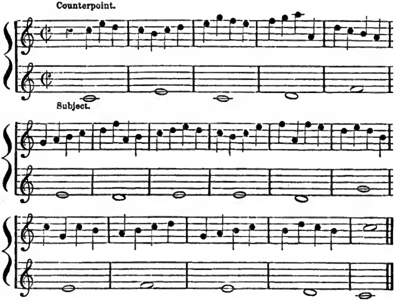
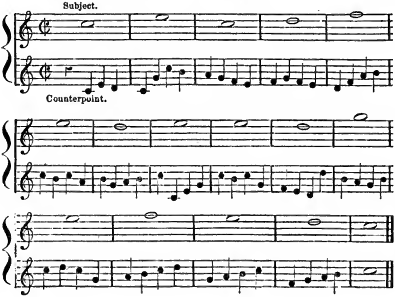


50. Example 1. of the *third species* of counterpoint in two parts; the subject being in the lower part.



Example 2. of the *third species* of counterpoint in two parts ; the subject being in the upper part.



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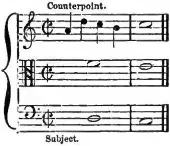
51. The cadences for the *third species* of counterpoint in *three* parts are formed from those of the same species in two parts, by the addition of a third part, as follows :—

1



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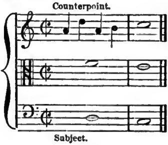
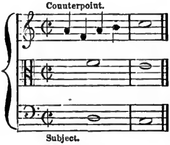
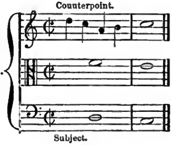


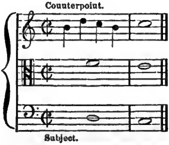
3.



4.



5.



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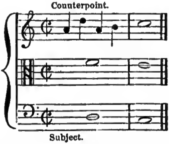

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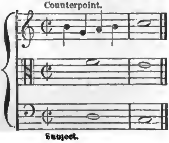

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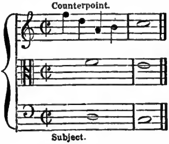

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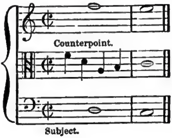

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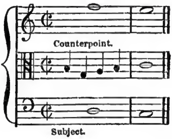

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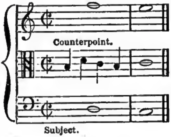

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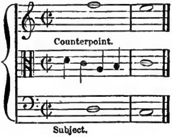

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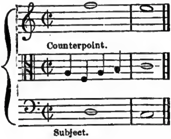

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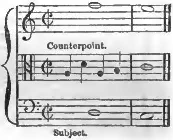

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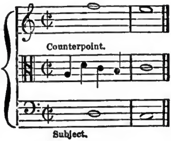

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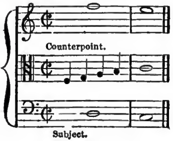

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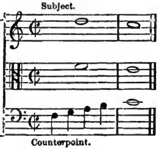

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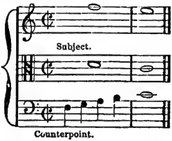

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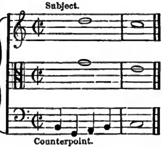

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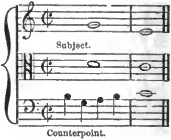

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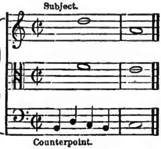

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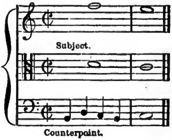

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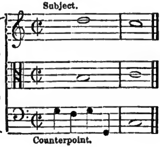

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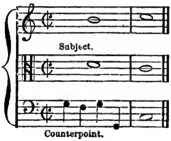

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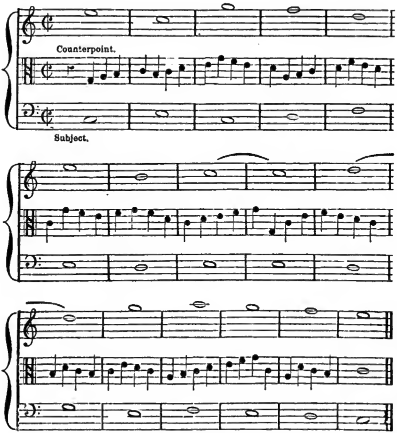
52. The above examples of cadences proper for the third species of counterpoint in three parts are worked out at length, in order to show the student that the counterpoint, as well as the third part, may be placed in all three parts of the composition.

53. Example 1. of the *third species* of counterpoint in *three* parts; the subject being in the bass, and the counterpoint in the middle part.



Example 2. of the *third species* of counterpoint in *three* parts; the subject being in the treble, and the counterpoint in the bass part.

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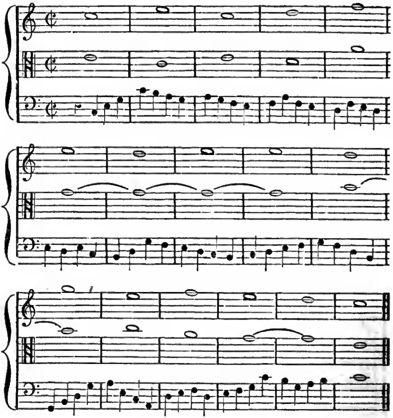
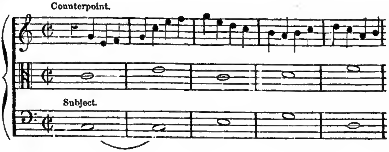
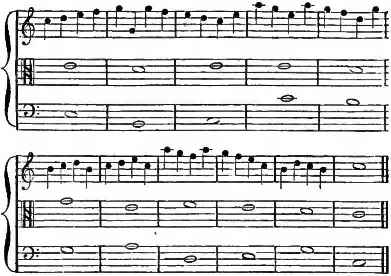


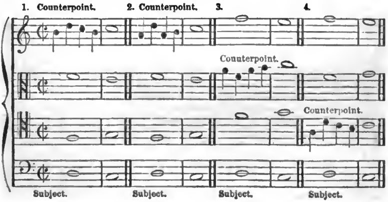
Example 3. of the *third species* of counterpoint in *three* parts; the subject being in the middle, and the counterpoint in the treble part.

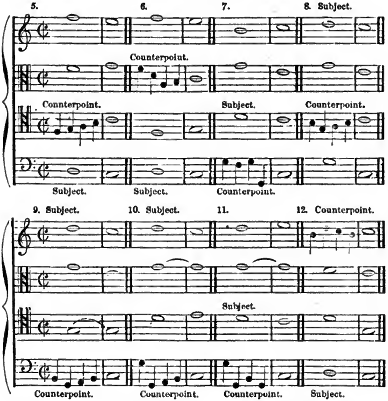




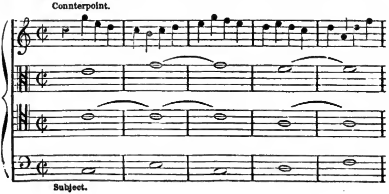
54. In the first and last of the above examples, the counterpoint may be placed in either of the parts not containing the subject; and students are recommended to practise this species of counterpoint, by composing counterpoints in each part.

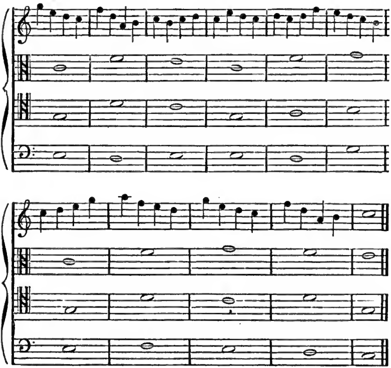
55. The cadences proper for the *third species* of counterpoint in *four* parts are formed from those in *three* parts, in the same manner in which the latter were formed from the cadences in two parts. The counterpoint may be placed in either of the three parts not containing the subject. The principal forms are subjoined.



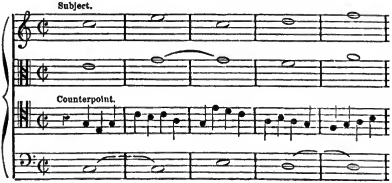


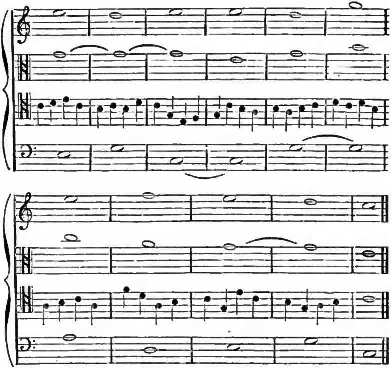
56. Example 1. of the *third species* of counterpoint in *four* arts; the subject being in the bass, and the counterpoint in the reble part.



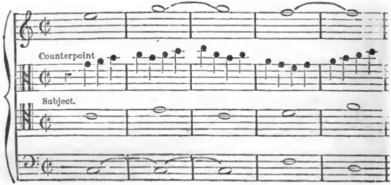


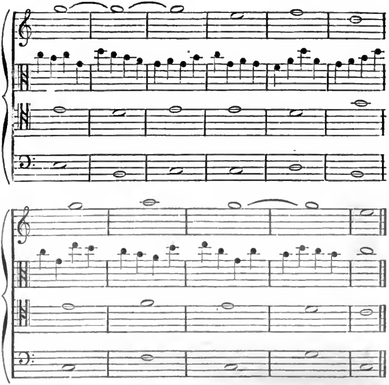
Example 2. of the *third species* of counterpoint in four parts; the subject being in the treble, and the counterpoint in the tenor part.



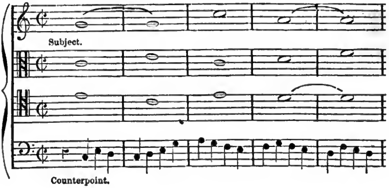


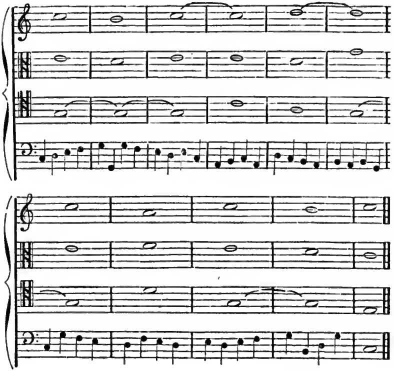
Example 3. of the *third species* of counterpoint in four parts ; the subject being in the tenor, and the counterpoint in the alto part.





Example 4. of the *third species* of counterpoint in four parts; the subject being in the alto, and the counterpoint in the bass part.

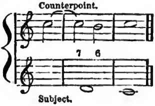




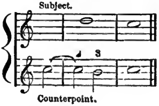
57. The *fourth species* of counterpoint consists of prepared discords and consonant suspensions, both of which are employed by syncopation, or ligature.

58. The cadences proper for the fourth species in two parts are formed by the discord of the *prepared seventh resolving into the sixth,* in the counterpoint when the subject is in the lower part, and by the discord of the *prepared second resolving into the minor third below,* when the subject is in the upper part.

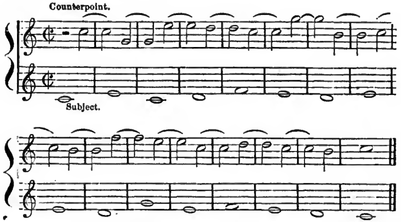
1.



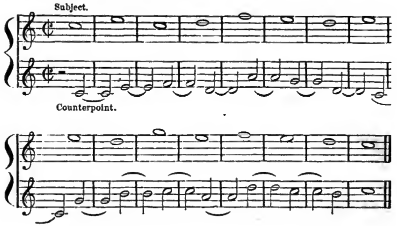
2.



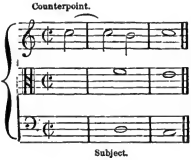
59. Example 1. of the *fourth species* of counterpoint in *two parts,* the subject being in the lower part.

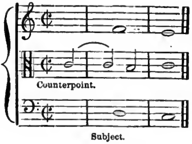


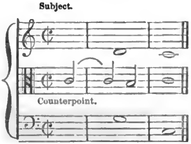
Example 2. of the *fourth species* of counterpoint in *two parts,* the subject being in the upper part.

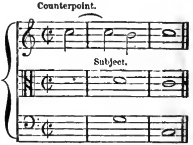


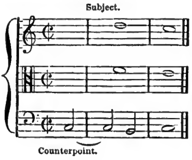
60. The cadences for the *fourth species* of counterpoint in *three parts* are formed from those in two by the addition of the third part, making up the harmony of the chords.

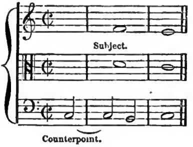




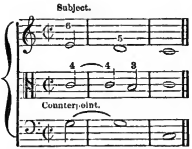


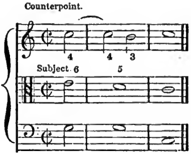




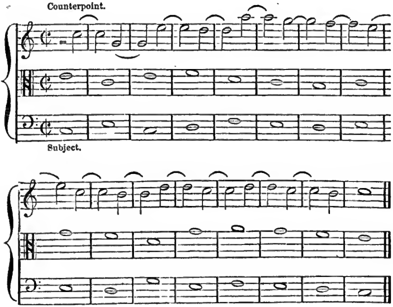


61. The second inversions of common chords are admitted in the fourth species of counterpoint in three or more parts. But this inversion must occur in the unaccented portion of the measure, in which the fourth is prepared so as to become a discord with the fifth on the next accented portion thereof.

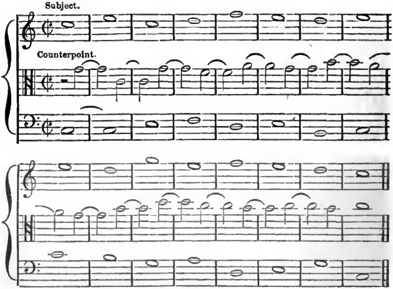




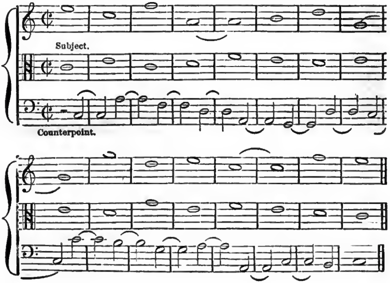
62. Example 1. of the *fourth species* of counterpoint in *three parts;* the subject being in the bass, and the counterpoint in the treble part.



Example 2. of the *fourth species* of counterpoint in *three parts;* the subject being in the treble, and the counterpoint in the middle part.

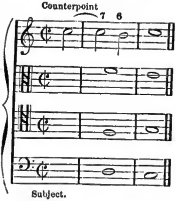


Example 3. of the *fourth species* of counterpoint in *three parts;* the subject being in the middle, and the counterpoint in the bass part.



63. The cadences for the *fourth species* of counterpoint in *four parts*, are formed from those of the same species in three, by the addition of a fourth part, which fills up the harmony.

1.



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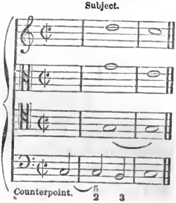

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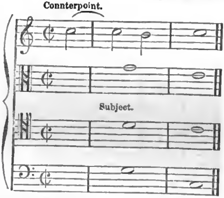
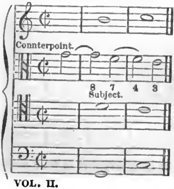


To which may be added,—

4.



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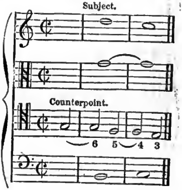

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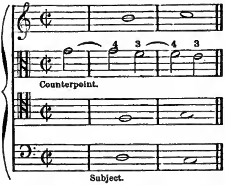
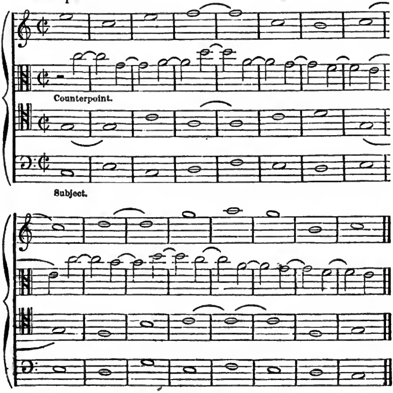
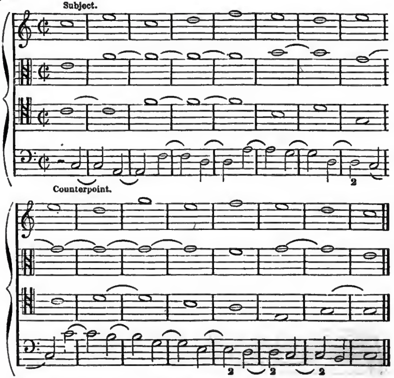


64. Example 1. of the *fourth species* of counterpoint in *four parts;* the subject being in the bass, and the counterpoint in the alto part.

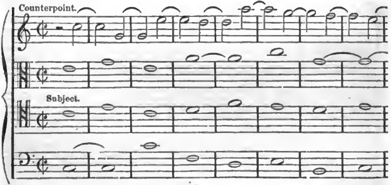


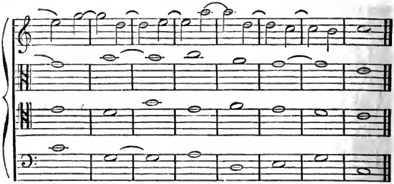
Example 2. of the *fourth species* of counterpoint in four parts;

the subject being in the treble, and the counterpoint in the bass part.

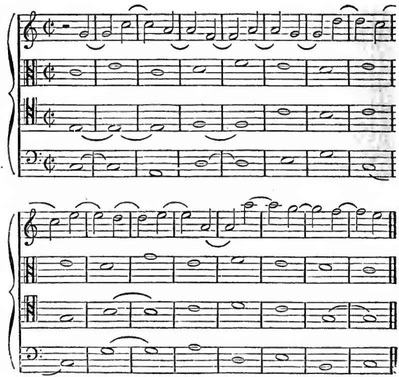


Example 3. of the *fourth species* of counterpoint in four parts; the subject being in the tenor, and the counterpoint in the treble part.





Example 4. of the *fourth species* of counterpoint in four parts; the subject being in the alto, and the counterpoint in the treble part.



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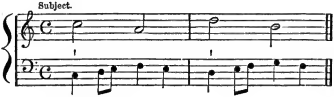
65. In the *fifth species* of counterpoint the measure may contain notes of any value, providing they make up together the duration of the note in the subject. In other words, each note of the subject may have one, two, or more notes in the counterpoint.

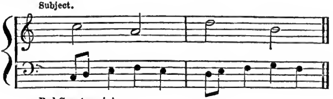
66. This intermixture of notes of various duration is called florid counterpoint (*contra-punctum floridum*) by writers on composition.

67. In this species two quavers may be put for a crotchet, in the *unaccented* portions of the measure, not in the accented. Thus :—



Good Counterpoint.

Not thus :—



Bad Counterpoint.

68. Hence four quavers in the counterpoint to the value of a minim are not allowed; and in order to render the counterpoint more cheerful, the second species should not be continued beyond two measures (of our assumed subject), i.e. it should not be thrice accented. But if it be employed through the third accented place in the composition, it should (in this place) be a suspended or syncopated concord or discord, so that the *force* of the accent may be destroyed, or deferred.

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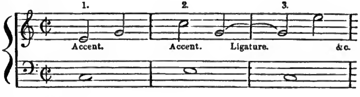
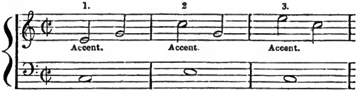
Thus :—

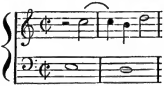


Not thus :—

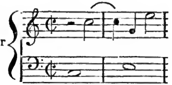


69. Moreover, the melody of the counterpoint is much improved by the use of short and long suspensions, both consonant and dissonant.

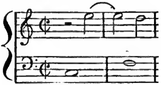
Examples of short suspensions :—

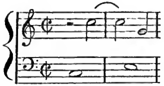

Dissonant.

or


Consonant.

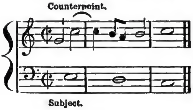
Long suspensions :—

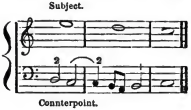

Dissonant.

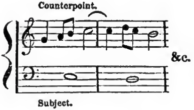

Consonant.

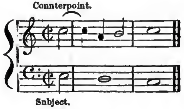
70. Further, in florid counterpoint the cadences, hitherto given in the first four species of counterpoint, are more or less ornamented and lively, in consequence of the greater number of notes in a measure.

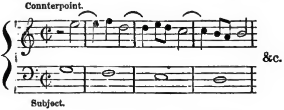
Examples of cadences in the florid, or fifth species of counterpoint :—

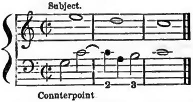


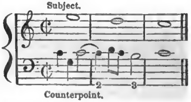






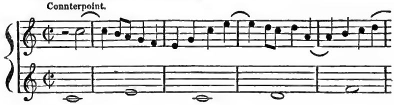


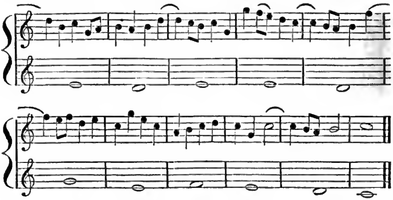




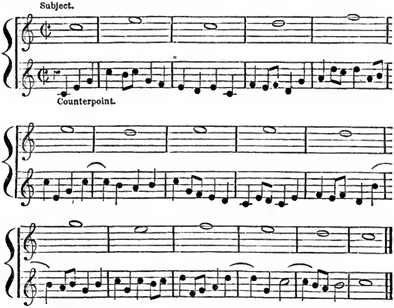
71. In these kinds of cadences care must be taken to avoid the resemblance of a succession of fifths and eighths as much as possible.

72. Example 1. of the *fifth species* of counterpoint in two parts, the subject being in the lower part.



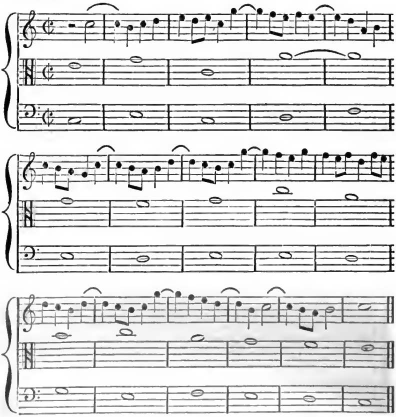


Example 2. of the *fifth species* of counterpoint in two parts, the subject being in the upper part.

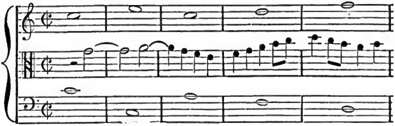


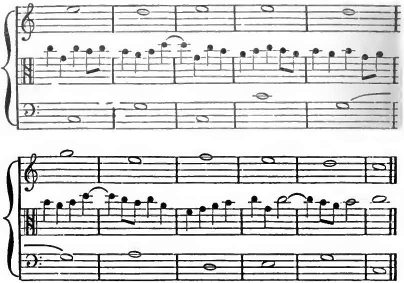
73. In the *fifth species* of counterpoint in three parts the cadences are formed, as before, from those in two parts ; but it is unnecessary to write them here, since they are the same as given in the foregoing species, but with the counterpoint varied as above in two parts.

74. Example 1. of the *fifth species* of counterpoint in three parts; the subject being in the bass, and the counterpoint in the treble part.

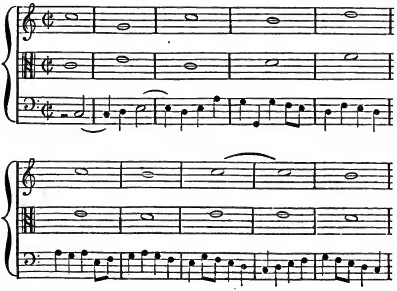


Example 2. The subject in the treble, and the counterpoint in the middle part.





Example 3. of the *fifth species* of counterpoint in three parts, the subject being in the middle, and the counterpoint in the bass.



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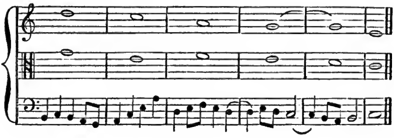
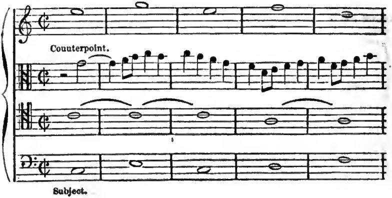
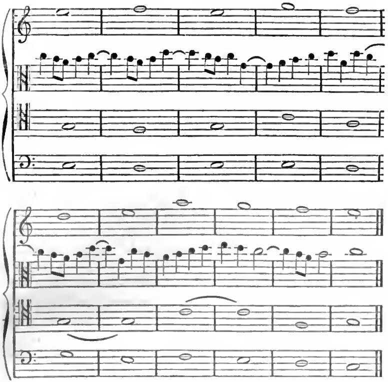


75. In the *fifth species* of counterpoint in four parts, the cadences are those already given in the foregoing species, but may be varied as in those in two and three parts.

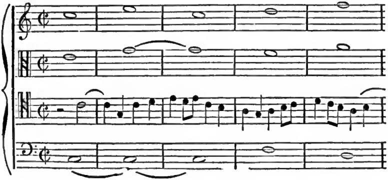
76. When the counterpoint is in the bass, this part must not ascend so as to produce second inversions of common chords, or chords of the fourth and sixth, nor any discord of difficult resolution. That is to say, all discords (including the fourth with the sixth, or second inversions of common chords) must be prepared, in this species as well as all the other species, in the *strict style* of composition.

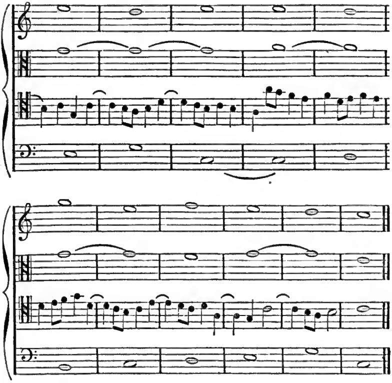
77. Example 1. of the *fifth species* of counterpoint in *four parts;* the subject being in the bass, and the counterpoint in the alto part.



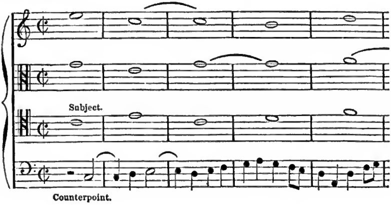


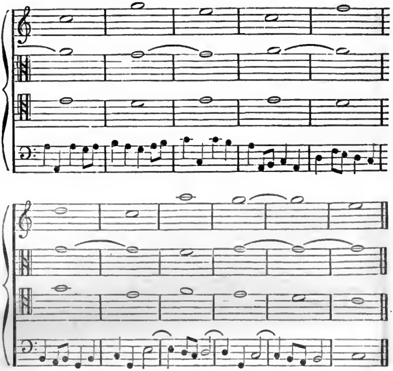
Example 2. The subject in the treble, the counterpoint in the tenor part.



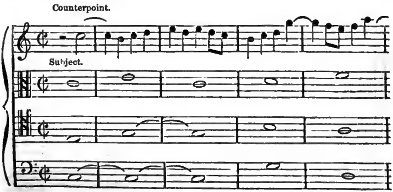


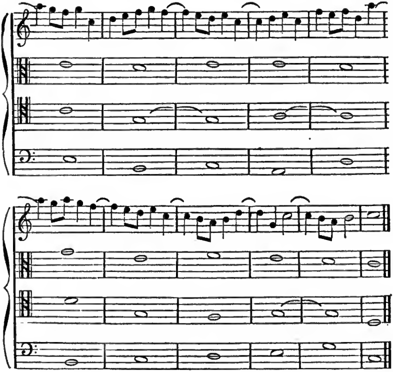
Example 3. The subject in the tenor, and the counterpoint in the bass part.





Example 4. The subject in the alto, and the counterpoint in the treble part.

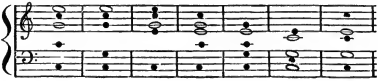




78. In a like manner, we can proceed to harmonize our assumed subject in all the five species of counterpoint in *five parts*. But since a common chord, and its inversion also, contain but three notes, we must, in five-part composition, double two of them in order to make up the number of parts.

79. Hence, in *five-part* harmony we may *double* the *perfect concords*, viz., the fifth and eighth; and, in the inversions of common chords, the imperfect concords, the third and sixth, may also be doubled.

1.



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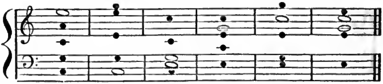

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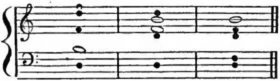
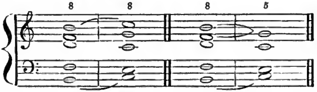
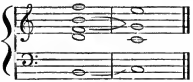


In these examples the doubled notes are shown by the black character; and, in the second example, it will be observed that the note B is *not* doubled. The reason is, that this note is the major seventh in the major scale C, and being the note leading to the initial note C, there would be consecutive octaves in the motion of the two parts, if this note B were doubled.

80. Nevertheless, when the *major seventh of the scale* is *in the bass, it may be doubled* in a *middle part* only, but not in the upper part, for in the extreme parts the major seventh must ascend to the initial note of the scale (or its octave note); whereas in a middle part, wherein it is doubled, it may descend to the fifth of the scale.



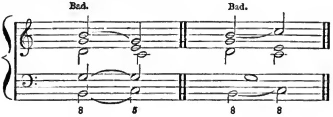
Bad progression. Idem.

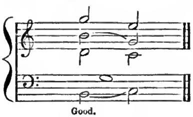


Good progression.

81. Nor must the major seventh be doubled in the upper part

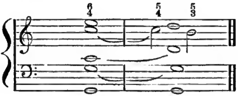
when the first inversion of the chord of the dominant is used, because of the faulty progressions.





82. Hence we see there are some cases in which the leading note may be doubled, but great caution is required in the disposition of the chord, in order to avoid consecutive octaves, and consequent bad harmony.

83. Whenever the second inversions of common chords (or chords with a fourth and sixth) are used, it is better to double the fourth (unless it is prepared as a regular discord), and not the sixth. In this case, one of the fourths is prepared as a discord in the succeeding chord.



84. The *discord of the second* (whether accompanied with the fifth, or with the fourth and sixth) is doubled in preference to the sixth; and this, when it is employed as a prepared second, or merely in regular transition between concord and concord.

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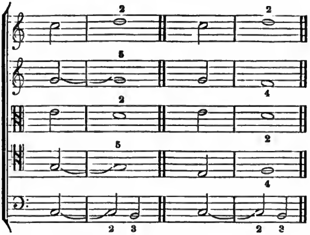
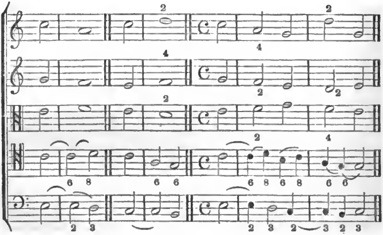
Example of prepared seconds doubled :—

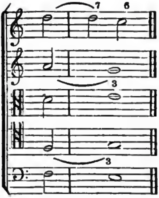


85. When the second is accompanied with the sixth, this sixth must move with the bass, in the resolution of the discord, as in the following examples.

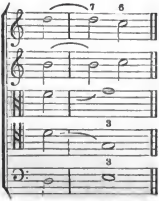


86. In the employment of prepared sevenths, it is better to double the *third* to the bass note.

1.

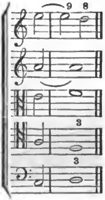


2.

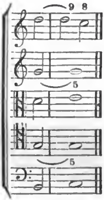


87. With the *prepared ninth* either the third, the fifth, or the sixth may be doubled.

1.



2.



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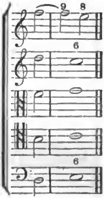
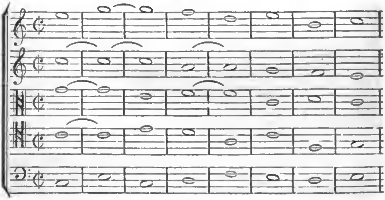
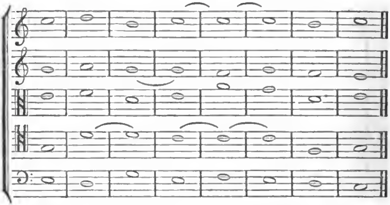
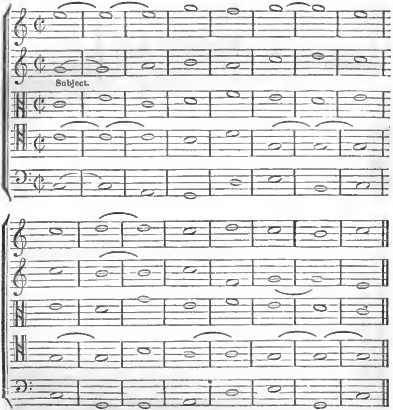


88. Example of the first species of counterpoint in *five* parts, the subject being in the bass part.

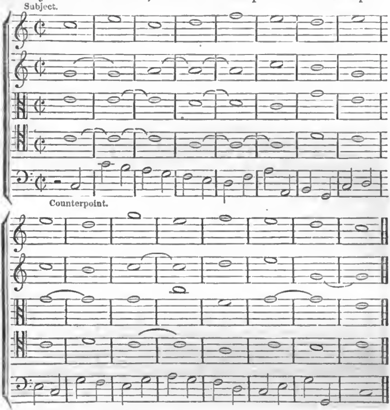




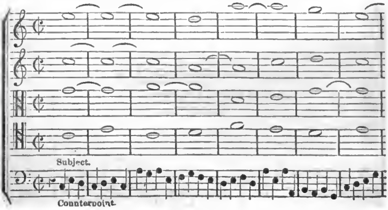
Another example of the same, the subject being in the alto part.



Example of the *second species* of counterpoint in five parts; the subject in the treble, and the counterpoint in the bass part.



Example 3. *Third species* of counterpoint in *five parts*; the subject in the tenor, and the counterpoint in the bass.



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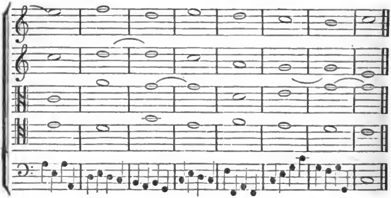
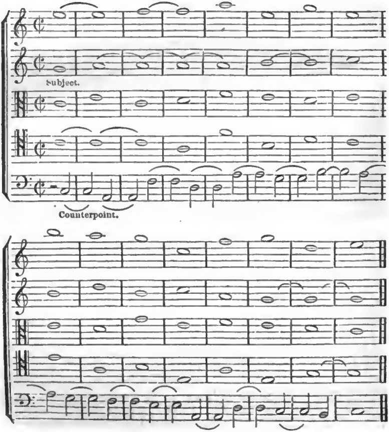
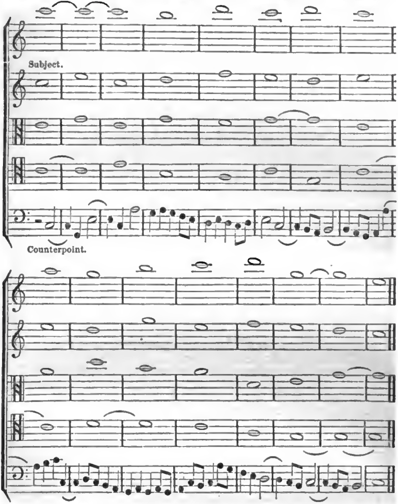


Example 4. *Fourth species* of counterpoint in *five parts;* the subject in the alto, and the counterpoint in the bass.



Example 5. *Fifth species* of counterpoint in *five parts*; the subject in the second treble, and the counterpoint in the bass.

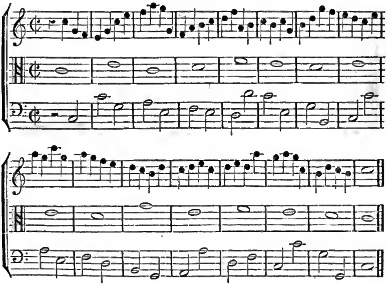


89. Although the counterpoint is written in the bass in the last five examples, it is not necessarily confined to this part; and we might write a counterpoint in each of the other parts in all the five species, and multiply examples; but having shown the methods, it is better to leave the exercises to the students for their own improvement.

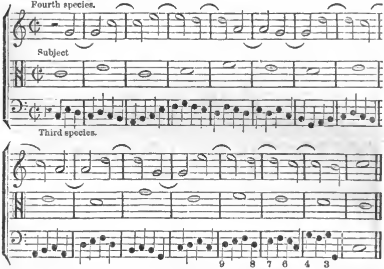
90. In the foregoing examples is exhibited but *one* species of counterpoint at a time, since the remaining part or parts are mere fillings-up of the harmony. But we might consider these latter parts, especially when they consist of notes equal in duration to those of the "subject," as belonging to the first species. For these additional or filling-up parts differ from this species only with respect to the notes (some of them at least) being of longer duration than a measure of time.

91. But in three-part composition, two species of counterpoint can always be employed at the same time, and this has, in fact, been already done, so far as combining the *first species* (as above hinted) with the second, third, fourth, and fifth. There remain, however, the combinations of the second with the third, fourth, or fifth species; of the third with the fourth, and with the fifth; and also of the fourth and fifth species; in three-part harmony.

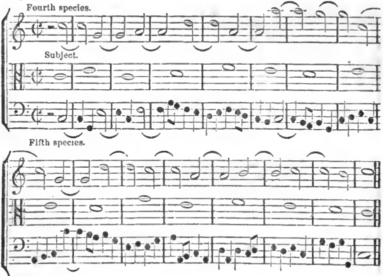
92. Example 1. The second and third species of counterpoint combined in three-part harmony; the subject being the alto part, the third species in the treble, and the second species in the bass part.



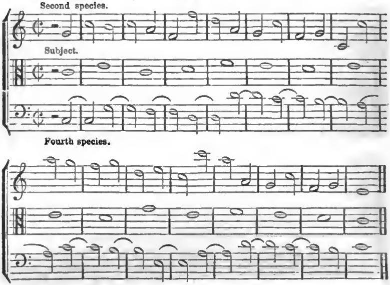
Example 2. The third and fourth species of counterpoint combined in harmony of three parts; the subject being in the alto part.



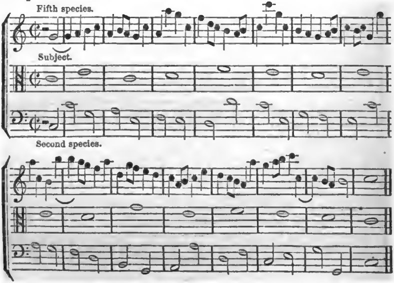
Example 3. The fourth and fifth species of counterpoint combined in harmony of three parts; the subject being in the alto part.



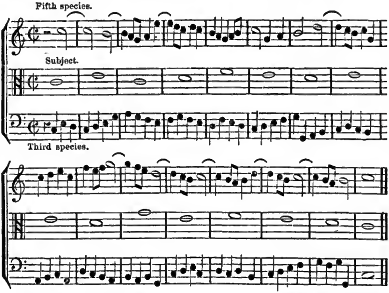
Example 4. Second and fourth species combined in three-part harmony, the subject being in the alto part.



Example 5. The second and fifth species of counterpoint combined in harmony in three parts, the subject being in the alto part.

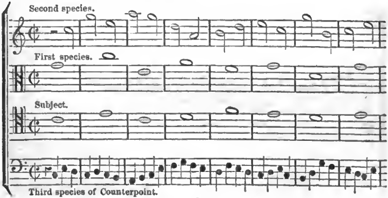


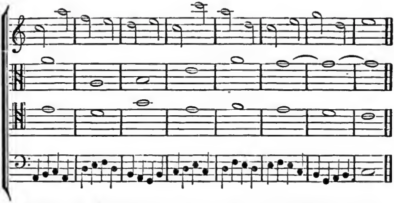
Example 3. The third and fifth species of counterpoint combined, in three-part harmony, the subject being in the alto part.



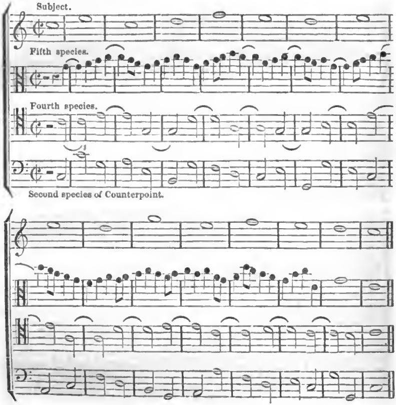
93. In a similar manner any three species may be combined together in *four-part* harmony, as in the following.

Example 1. Wherein the first species is written in the alto part, the second in the treble, and the third in the bass, the subject being in the tenor part.

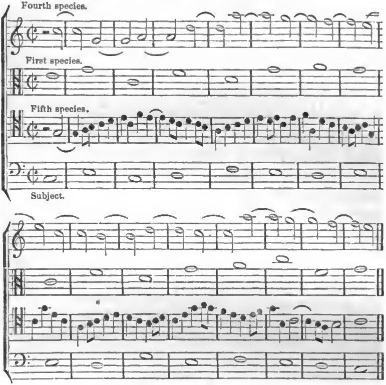




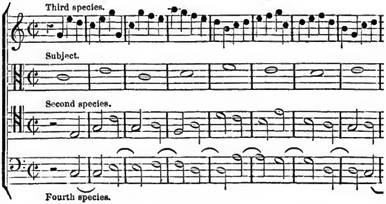
Example 2. Wherein the second, fourth, and fifth species of counterpoint are combined in four-part harmony, the subject being in the treble part.

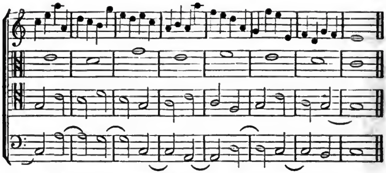


Example 3. in which the first, fourth, and fifth species of counterpoint are combined in four-part harmony.



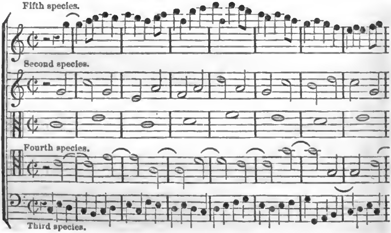
Example 4. containing the second, third, and fourth species.

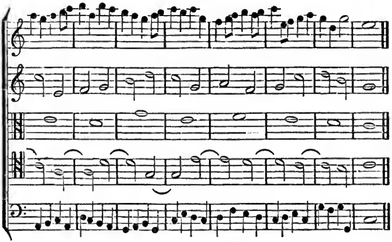




94. In a similar manner, also, we may proceed to the combination of four different species as an accompaniment to our subject, and again multiply exercises ; but as this chapter has already become extensive, and the examples numerous, one example of a mixture of four species must suffice, with the earnest recommendation to students to exercise themselves in writing all the possible combinations of four species, especially of the second, third, fourth, and fifth, to the subject above given, and thus complete for themselves that which must necessarily be left incomplete, in this respect, in this work.

Example of the second, third, fourth, and fifth species of counterpoint combined in five-part harmony ; the subject being in the alto part.





95. It is now considered that enough has been done to explain the methods of harmonizing a given subject in the various species of simple composition, called counterpoint in the strict style, in which no discords are allowed in the accented portions of a measure except such as are regularly previously prepared, nor any in the unaccented portions, except only such as are transient, or merely notes passing between concord and concord.

CHAP. II.

ON THE FREE STYLE—IMITATION—FUGUE—CANON.

1. During the study of the examples of counterpoint already given, it cannot have escaped the notice of the student that each counterpoint, wherever placed, forms a distinct melody of itself, while it makes an harmonious accompaniment to the given melody or subject.

2. Hence it readily follows, that the subject itself may also become the counterpoint, and the counterpoint the subject ; in

the first species, for example, we may assume either the given melody or its counterpoint for our subject.

3. Moreover, there is yet another kind of counterpoint, which readily suggests itself, viz., that in which the notes are of *longer* duration than those of the subject ; indeed, this last kind is as common in practice as those kinds in which the notes of the counterpoint are either equal to, or shorter, than those of the given subject. In the foregoing examples this occurs in those parts which fill up the harmony.

4. In fact, except in the psalmody of divine worship, it rarely happens that the parts of the harmony move equally ; in the so-called services (the Te Deum and other hymns of the Ritual), anthems, motets, &c., it is by no means unusual to employ florid counterpoint (the fifth species), more or less, throughout.

5. The free style of composition requires more rhythmical arrangement of the notes of the subject, than the strict. It admits the use of all kinds of discords, prepared and unprepared. Thus chords of the seventh, of the seventh and false or diminished fifth, of the seventh and ninth, of the augmented sixth, &c., and all their derivatives, are employed freely in this style ; and such is the licence granted to a composer, that he may discard almost every rule laid down in the strict style, so long as the music he composes is tolerable to the ear.

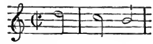
6. From this freedom arises the immense variety of character in music for the theatre, opera, &c.—the serious, the comic, the rustic, the polite, the quaint, &c. &c.

7. In the free style a composer is not confined to the use of *transient* discords in the *unaccented* portions of the measure only, but he may place them in the *accented parts* thereof, where they are called by another name, and are "appogiaturas." These appogiaturas must, however, be resolved into concords, and they are as transient in the accented as in the unaccented portion of a measure, and pass between concord and concord.

8. The transitory notes here spoken of do not form parts of the regular harmony, but are introduced for the sake of avoiding

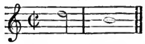
too many skips in the melody, and making it flow more smoothly The following will explain what is meant;

Ex. 1.



instead of

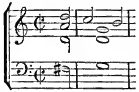
Ex. 2.



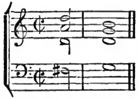
in which the note C is introduced in the accented portion of the measure, leading the melody from D to B, instead of skipping from D to B at once, as in Ex. 2.

9. It is to be understood that the harmony which accompanies these appogiaturas is that which belongs to the *following note*, and not to the appogiatura.

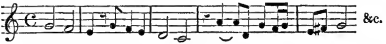
In the above example, the chord which accompanies C is that which belongs to B, thus :—



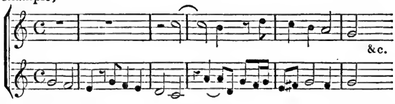
the same as



10. Another distinction between the strict and free styles of composition is the free use of all kinds of rests, in any portion of a measure, as for example the following—



and also during one or several whole measures, as in the next example;



in which the upper part is *silent*, or "at rest," during two and a half measures.

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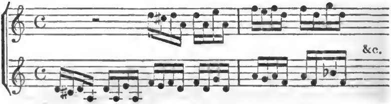
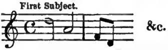
11. In the free style every composition is produced in all its parts, according to the fancy of the author; not only may he choose to invert his subject, but he may harmonize it in any species or all species of counterpoint; he may make one part imitate another, either by the repetition of the same notes, or by similar phrases higher or lower, *at any interval whatever*. Thus in the last example the upper part is an imitation of the lower, at the expiration of two and a half measures, the two parts thus mutually harmonizing, or forming a species of counterpoint to each other. The following is a similar example of imitation;



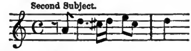
in which the upper part imitates the lower, after a silence during half a measure, the two parts forming counterpoints to each other from this point.

12. In the above examples we see that there is but *one* melody or subject, which is presented in one of the parts, and imitated in another. But it generally happens that the counterpoint to a subject is not a mere imitation of it, but another distinct melody or subject, and the *two* subjects form counterpoints to each other. For example, the following two subjects,

First Subject.

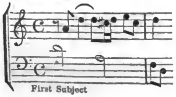


Second Subject.



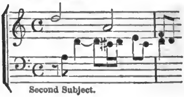
will harmonize together, whichever is placed lowest.

Second Subject.

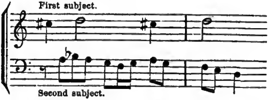


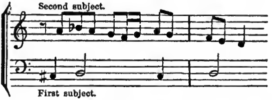
or

First Subject.



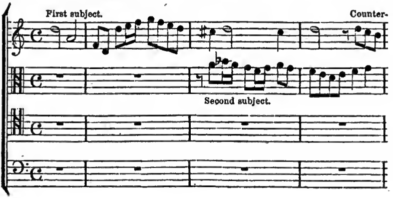
13. In like manner the two following subjects will harmonize with each other in any position.

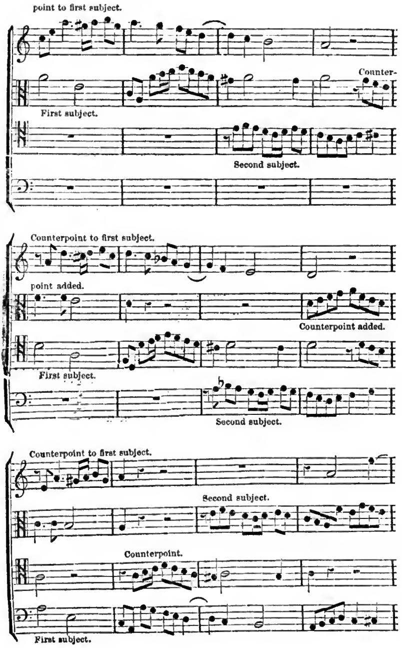


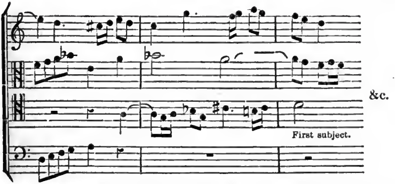


14. When the composition is constructed in this way by making the two subjects counterpoints to each other, this kind of harmonizing is called *double* counterpoint, and is employed in all kinds of fugues, and chorus compositions in the style of fugue.

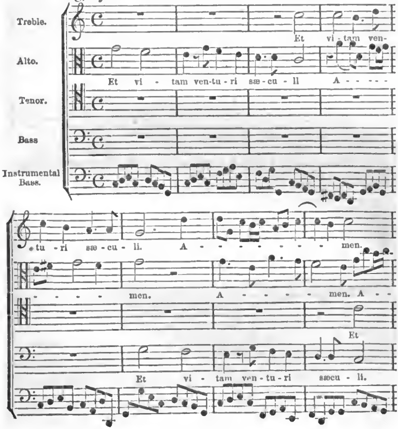
15. A fugue is a composition in which the subject is imitated by all the parts in succession, not only in the same scale, but in every transposition thereof, and at all intervals, the subject thus being made to *fly*, as it were, through all parts and positions, now here, now there. The subjects above given form a fugue in the following manner:—

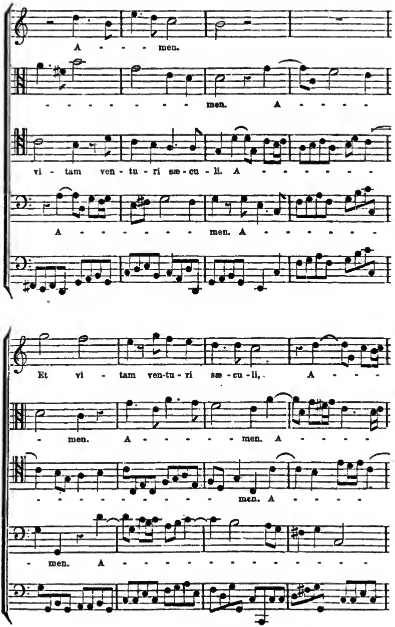


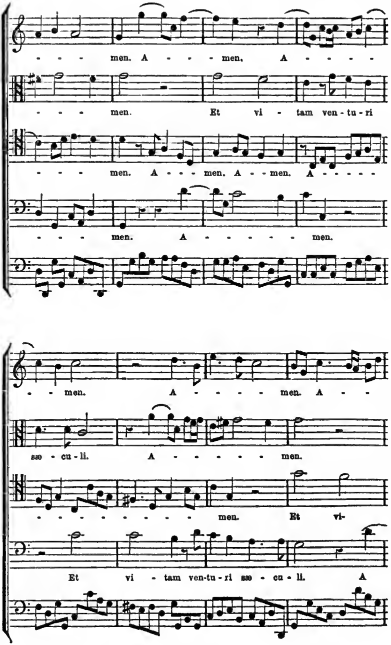

point to first subject.
Counter-
First subject.
Second subject.
Counterpoint to first subject.
point added.
Counterpoint added.
First subject.
Second subject.
Counterpoint to first subject.
Second subject.
Counterpoint.
First subject.

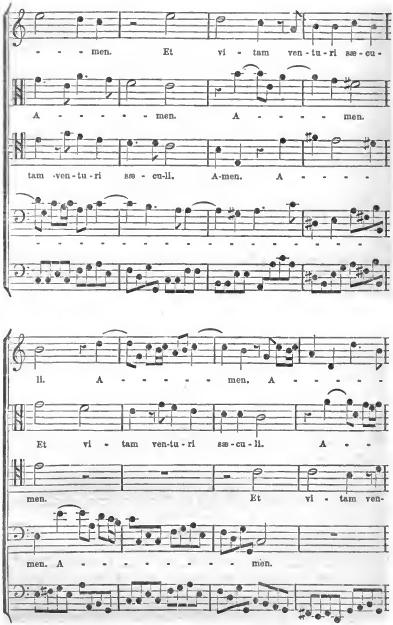


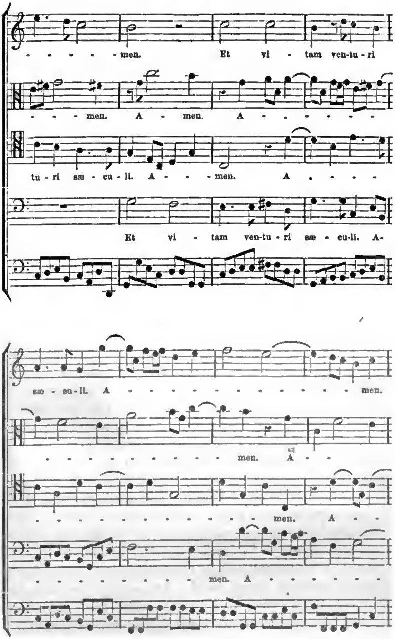
16. Fugues are generally written for performance on the organ, or in choruses, especially in oratorios, church "services," masses, &c.; one of the finest examples of such chorus fugues is the following, by Giacomo Perti.

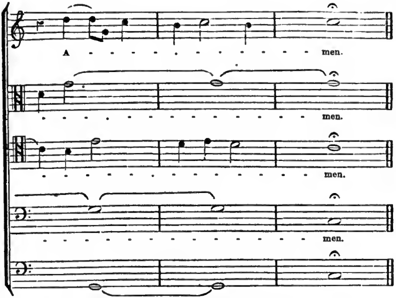

Treble.
Alto.
Tenor.
Bass
Instrumental Bass.
Et vi - tam ven-
Et vi - tam ven-tu-ri sæ-cu-li A - - - -
tu - ri sæ - cu - li. A - - - - - - - - men.
- - - - men. A - - - - - men. A - -
Et
Et vi - tam ven-tu-ri sæcu - li.


A - - - men.
- - - - - - - - - men. A - - - - -
vi - tam ven - tu - ri sæ - cu - li. A - - - - - - -
A - - - - - - - men. A - - - - - - - -
Et vi - tam ven-tu - ri sæ - cu - li,. A - - -
- men. A - - - - - - men. A - - - - -
- - - - - - - - - - - men. A - - - - -
- men. A - - - - - - - - - - - - -


- - - men. A - - - men, A - - - -
- - - men. Et vi - tam ven - tu - ri
- - - men. A - - - men. A - - men. A - - - - -
- - - men. A - - - - - - men.
- - men. A - - - - - men. A - -
sæ - cu - li. A - - - - - - men.
- - - - - - - - - - - men. Et vi-
Et vi - tam ven-tu - ri sæ - cu - li. A


- - - men. Et vi - tam ven - tu - ri sæ - cu -
A - - - - - - men. A - - - - - men.
tam ·ven - tu - ri sæ - cu-li. A-men. A - - - - -
li. A - - - - - - men. A - - - - - -
Et vi - tam ven-tu - ri sæ - cu - li. A - -
men. Et vi - tam ven-
men. A - - - - - - - - - men.

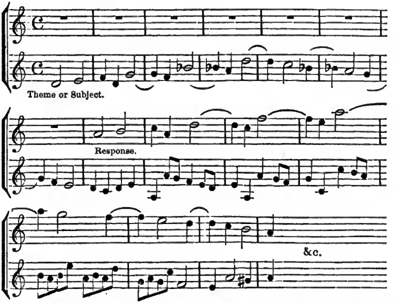

- - - - - - men. Et vi - tam ven-tu - ri
- - - men. A - men. A - - - - - - -
tu - ri sæ - cu - li. A - - - men. A - - - -
Et vi - tam ven-tu - ri sæ - cu-li. A-
sæ - cu - li. A - - - - - - - - - - - - - men.
- - - - - - - - - - - men. A - -
- - - - - - - - - - - - - - men. A - -
- - - - - - - - - - men. A - - - - - - -


A - - - - - - - - - - - - - men.
- - - - - - - - - - - - - - men.
- - - - - - - - - - - - - - men.
- - - - - - - - - - - - - - men.

17. The instrumental bass consists entirely of the third species of counterpoint, viz., eight quavers in the measure, all the vocal parts being written in florid counterpoint, i.e. the fifth species. The construction of this fine fugue is as follows: the principal theme, or subject, is led by the alto part, and is imitated, or responded to, by the treble in the second half of the third measure, where the subject ends; at the second crotchet of the fourth measure the alto part is an additional subject, formed by the counterpoint to the treble, which it accompanies to the end of the principal theme, in the sixth measure. Here the bass starts with the subject, which is note for note the same as the alto at the commencement of the chorus, the counterpoint being in the treble part, and the same additional subject as in the alto part in the fourth measure, but transposed a fourth higher, as is the principal theme itself. At precisely the same distance from the commencement of the bass that the treble is from the alto, the tenor commences the principal theme, the bass performing the counterpoint. In the seventh measure there is a

third melody on the word Amen, introduced in the alto part, which is also imitated in the treble, a fifth higher in the second half of the ninth measure, which third theme is employed between those parts during the remainder of the chorus.

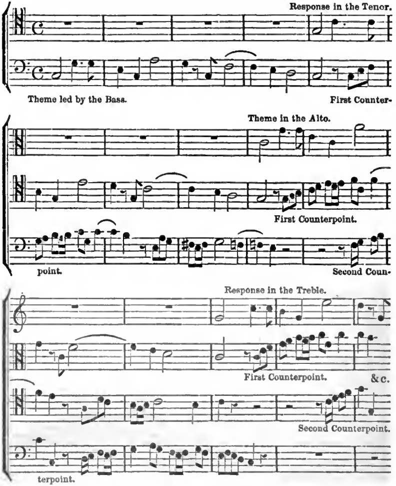
18. It will be observed, that the principal theme differs in the treble and tenor parts from the alto and bass, in the first, or starting note which is the *same as the second note*, whereas in the alto and bass, the theme commences by *falling a tone from the first to the second note.* This is very frequently the case, but not always so. For we have many specimens of fugues wherein the responding parts proceed by precisely the same degrees as the leading part. The following, for example, from John Sebastian Bach's toccata and fugue in D, dorico, is constructed in this way.



In this example the response has every degree throughout the same with the leading theme, both parts being written in the 1st form of the minor scale.

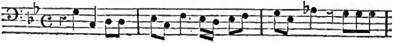
9. Haydn's chorus, in his Mass in C, has the response commencing at the instant when the leading theme ends; at the

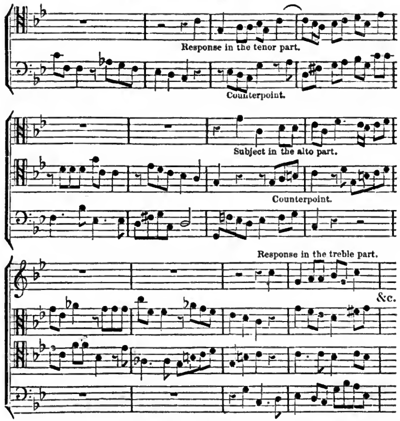
end of the response by the tenor, the subject is commenced by the alto; and the response is again commenced by the treble part at the close of the subject by the alto. Thus :—



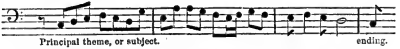
20. Sometimes the response is made immediately *after* the subject is closed, as in Handel's chorus, "He trusted in God."

Subject, or leading theme, in the bass part.

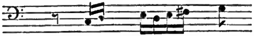



Response in the tenor part.
Counterpoint.
Subject in the alto part.
Counterpoint.
Response in the treble part.
&c.

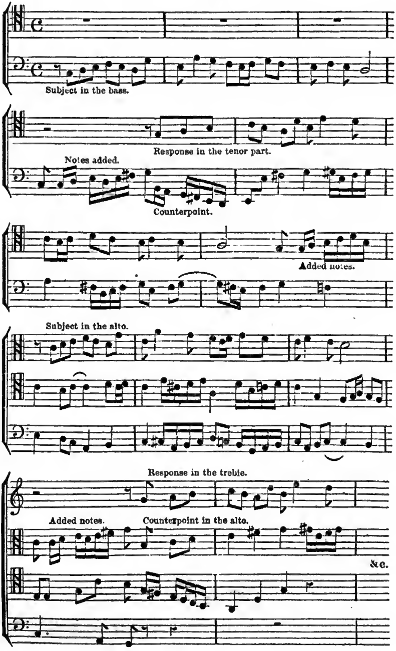
21. But when the response does not commence at the end of the theme, nor immediately after it, a few additional notes are appended to the theme, leading to the response in the transposed scale, as in the following example, from Mozart's grand mass in C.



To which is added the following short piece, viz.



Leading to the note G, upon which the response commences in the following manner.



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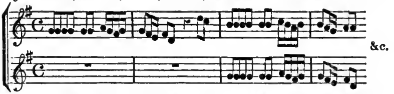
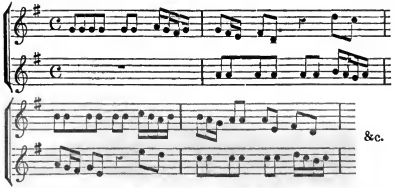
22. When a theme is proposed for imitation, it is not always necessary to construct the answer in a transposed scale, as in the fugue, but the imitation may take place in the same scale in which the subject is proposed, either in unison with it, or at *any* distance, second, third, fourth, &c. above or below. Thus:—

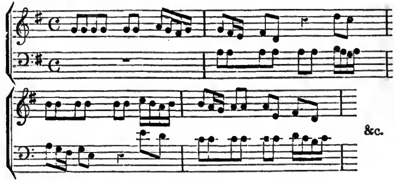


the second part imitates the first in the unison.

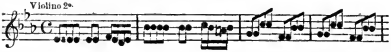
23. But the imitation can also be made a degree higher, or in the second, thus:—



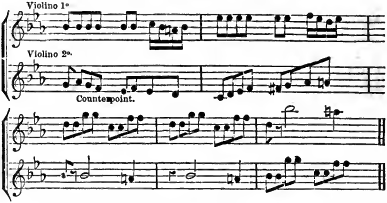
24. But if the imitation, instead of being made in the second treble part, be transposed an octave lower, it is then in the seventh below. Thus:—



25. One of the most beautiful specimens of this light style of imitation is the overture to Zauberflöte, by Mozart, in which, after fifteen measures of solemn harmony, the second violin part leads off the proposed theme, thus :—

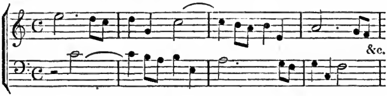


which is responded to by the first violin in the fifth above, at the fifth measure, and at the instant the subject ends.

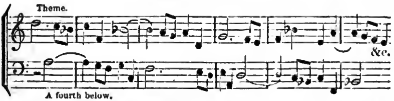


The second violin proceeding with the counterpoint, and proposing a second but shorter subject for imitation in the seventh measure, and which is imitated by the first violin part in the ninth.

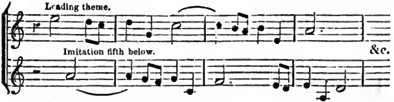
26. As a specimen of imitation in the third below, the following is taken from the fugue in D, Dorico (i.e. in the doric mode of the ancients), already quoted in § 18.



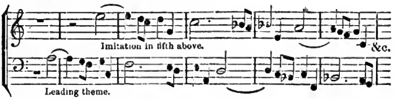
27. As a specimen of the same in the fourth below, the same great master (J. S. Bach) has given us the following example (from the same fugue):—



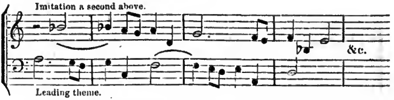
Bach also gives the same kind of imitation in the fifth below:



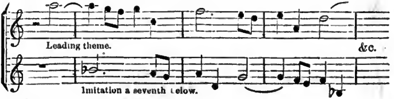
And also in the fifth above, thus:—



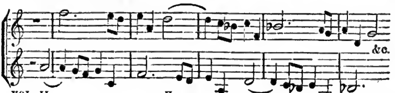
And also in the second above:—



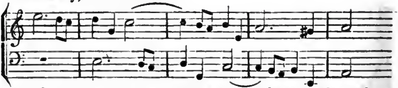
And also the inversion of this, i.e., in the seventh below:—



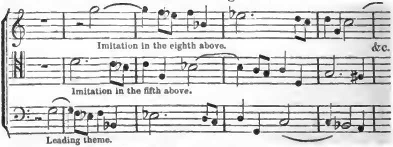
Also in the sixth above:—



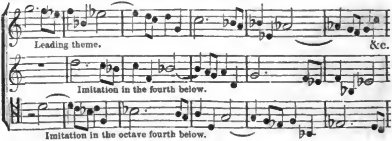
And lastly, in the octave:—



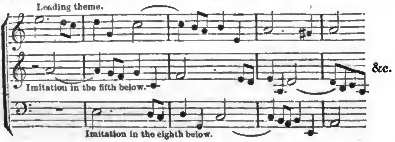
28. But the same great composer has shown us how these various species of imitation can be combined in the different parts of the harmony. In the following passage, for example, we have imitations in the fifth and eighth above.



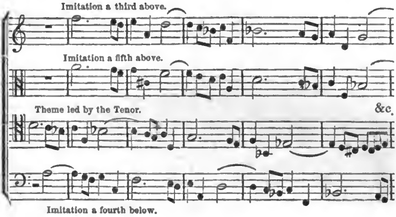
In another passage, we have imitation in the fourth below, combined with imitation in the octave, thus:—


Leading theme.
&c.
Imitation in the fourth below.
Imitation in the octave fourth below.

In another place, the imitations are given in the fifth and eighth below, the combination being as follows.

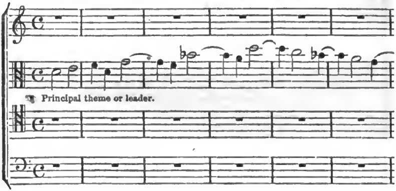


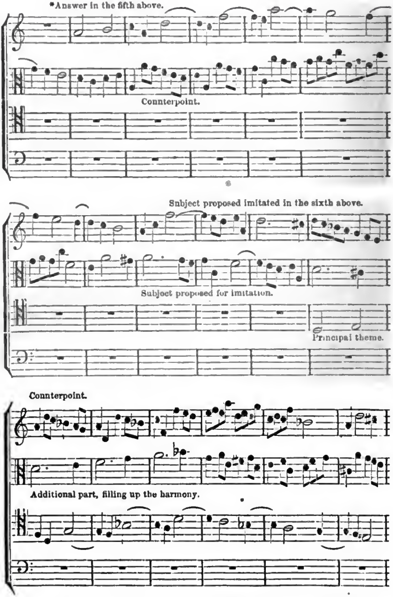
And again in a fourth passage we have combined imitations in the fourth below, fifth above, and third above the leading passage, thus :—



29. These examples serve to show in what manner knowledge and genius can develop the resources of this beautiful science. There is not, perhaps, a nobler specimen of the art of fugue writing to be found, and hence it is considered of importance to give the whole of this composition by the renowned Bach, in order that the student may perceive how this author has connected the various parts together.

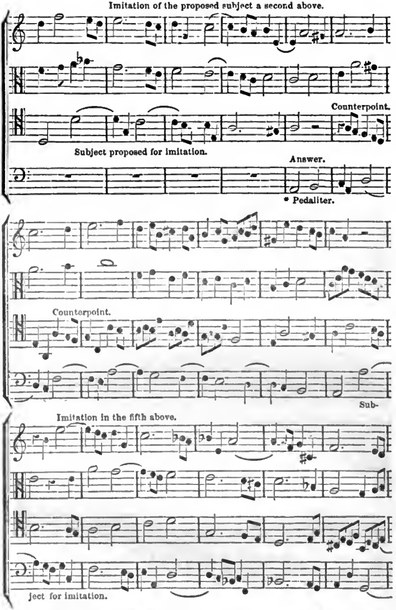
Fuga, Dorico Plagale, for the organ, by John Sebastian Bach.




*Answer in the fifth above.
Counterpoint.
Subject proposed imitated in the sixth above.
Subject proposed for imitation.
Principal theme.
Counterpoint.
Additional part, filling up the harmony.

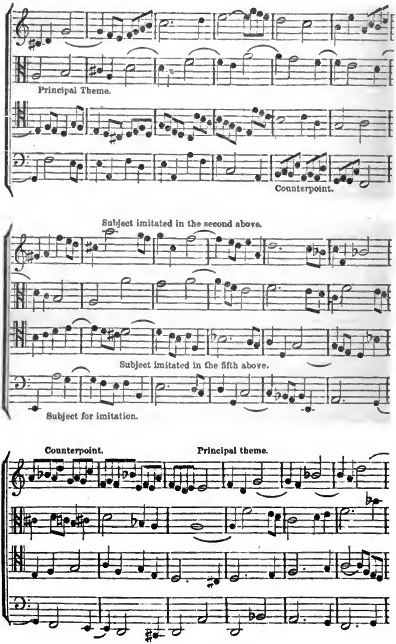
---

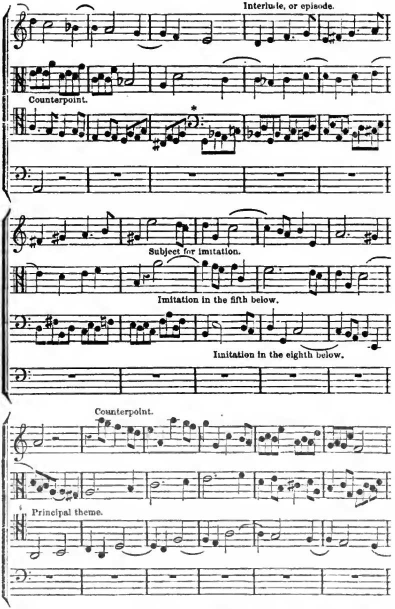
* It will be perceived that the "answer" is wholly symmetrical with the "leader."


Imitation of the proposed subject a second above.
Counterpoint.
Subject proposed for imitation.
Answer.
* Pedaliter.
Counterpoint.
Sub-
Imitation in the fifth above.
ject for imitation.

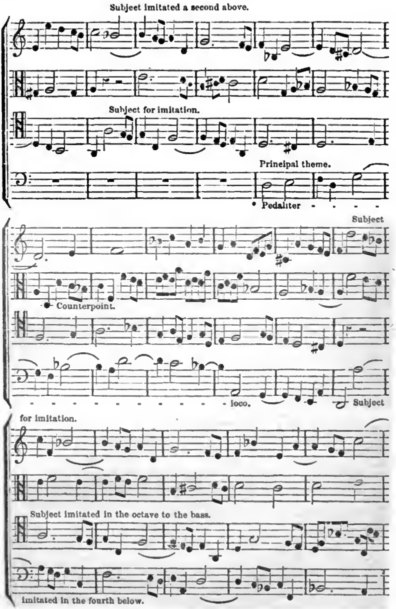
---

* *Pedaliter*—i. e. the music written on the lowest or bass staff is to be performed with the feet on the pedals; the sounds produced thereby being all an octave *lower* than represented by the notes.


Principal Theme.
Counterpoint.
Subject imitated in the second above.
Subject imitated in the fifth above.
Subject for imitation.
Counterpoint.
Principal theme.

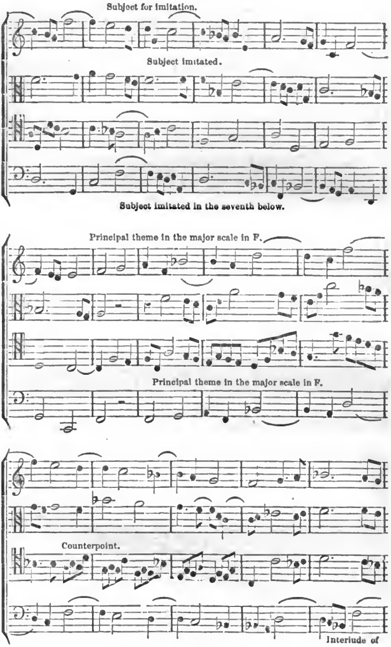


* Bass clef substituted for the mean, to avoid the use of too many lines, the notes being decidedly bass, and not tenor.


Subject imitated a second above.
Subject for imitation.
Principal theme.
* Pedaliter - - - -
Subject
Counterpoint.
- - - - - - - - - - - - - loco.
Subject
for imitation.
Subject imitated in the octave to the bass.
imitated in the fourth below.

---

* This passage is to be performed an octave lower, i. e., with the lower pedals, until the word "loco," when the notes are in their proper position.


Subject for imitation.
Subject imitated.
Subject imitated in the seventh below.
Principal theme in the major scale in F.
Principal theme in the major scale in F.
Counterpoint.
Interlude of

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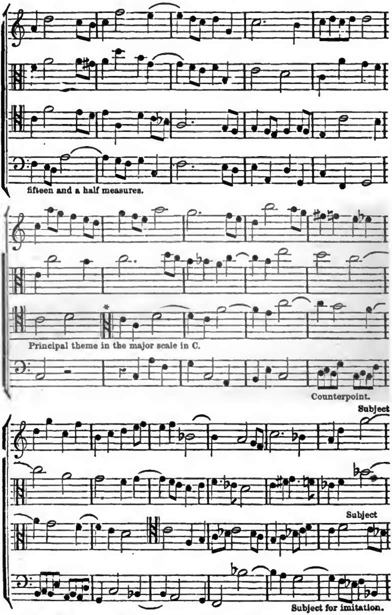
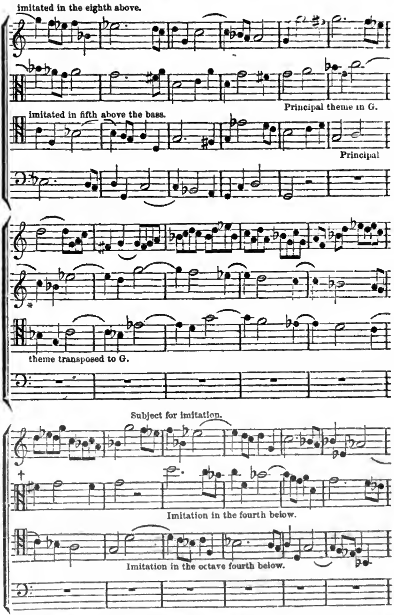

fifteen and a half measures.
*
Principal theme in the major scale in C.
Counterpoint.
Subject
Subject
Subject for imitation.

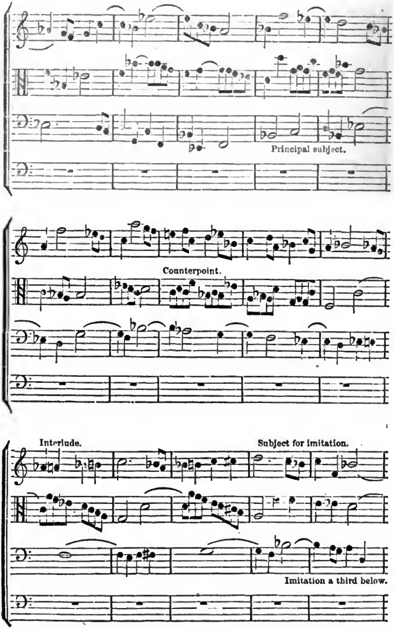
---

* Alto clef substituted for the tenor, to avoid the use of too many ledger lines.


imitated in the eighth above.
Principal theme in G.
imitated in fifth above the bass.
Principal
theme transposed to G.
*
Subject for imitation.
+
Imitation in the fourth below.
Imitation in the octave fourth below.

* G clef substituted for the mean, to avoid the use of too many ledger lines, the theme carrying the notes into the treble.

+ Alto clef restored.



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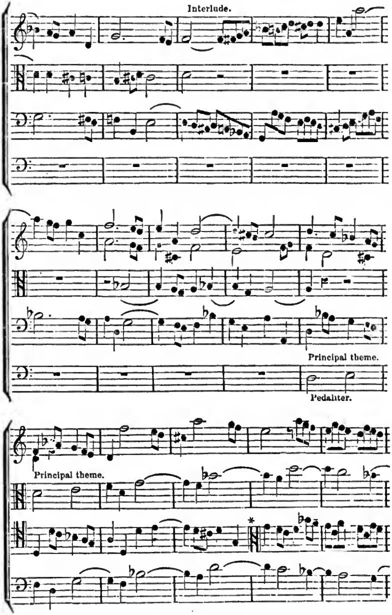
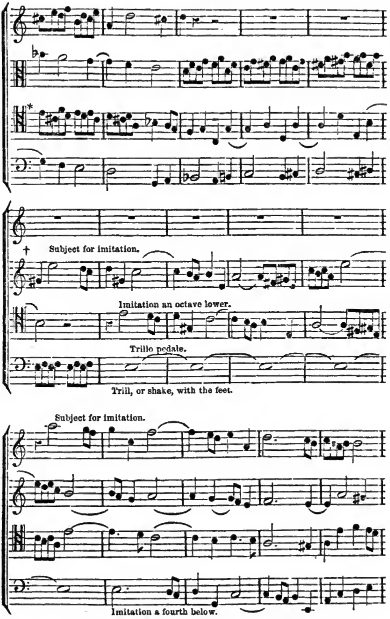
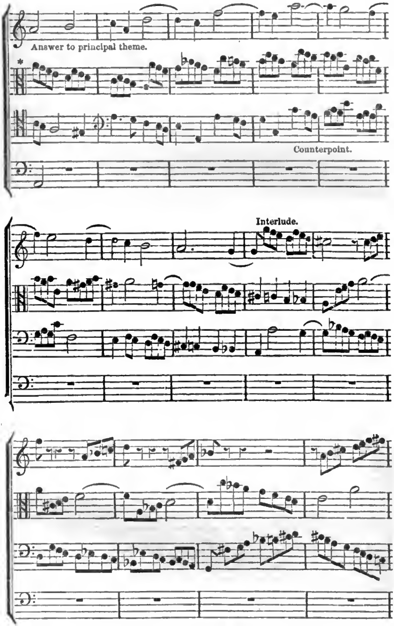


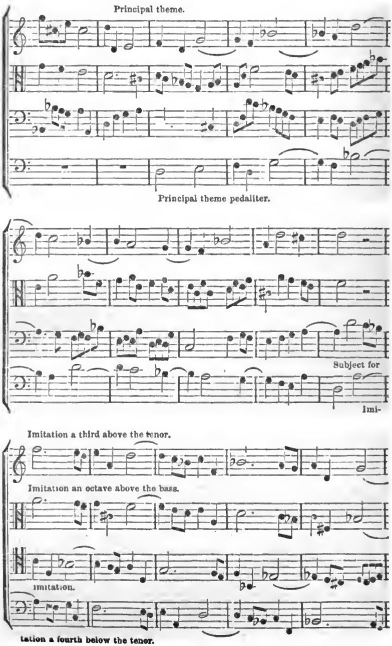
* Alto clef, for tenor.


*
†
Subject for imitation.
Imitation an octave lower.
Trillo pedale.
Trill, or shake, with the feet.
Subject for imitation.
Imitation a fourth below.

* Tenor clef restored. † G clef, for the alto.



* Alto clef restored.


Principal theme.
Principal theme pedaliter.
Subject for Imi-
Imitation a third above the tenor.
Imitation an octave above the bass.
imitation.
tation a fourth below the tenor.

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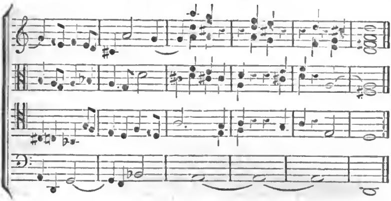
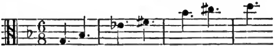


30. In this magnificent organ composition, the principal theme is nothing other than the minor scale of the 1st form arranged in a certain rhythmical manner, so as to give it a melodic character; and how wonderfully grand and various is the counterpoint, or harmony, to this scale herein invented by the author.

31. In grand choruses, in the fugue style, the principal subject generally expresses the full meaning of the words to which it is set; at least this is the case with the best masters, especially Handel; witness his chorus, already quoted, "He trusted in God," in the oratorio, "Messiah."

32. But in the lighter kinds of musical composition, the oddest ideas occur in the principal theme; such, for example, as Dominico Scarlatti's celebrated "Cat's Fugue," the subject of which is said to have been produced by his cat walking over the keys of his harpsichord, and which is as underwritten:—



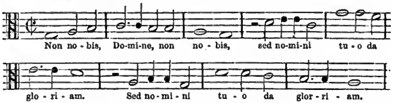
Theme, or subject, for imitation in fugue.

which is as unmelodious as anything can well be conceived to be; yet Scarlatti has made a very pleasing fugal composition out of it.

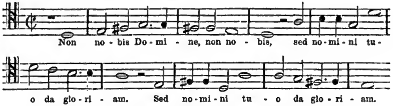
33. In the foregoing examples of imitation the subject chosen consists of only a few notes; this is generally the case in com-

positions in the fugue style. But when the theme consists of two or more phrases, so as to contain a complete, or nearly complete, period, every note of which is strictly imitated in the answering parts of the composition (whether in the unison, octave, fifth, or any other interval from the position of the leading part), the piece is not called a fugue, although the subject still "flies" through all the parts, and the parts strictly adhere to it; but because of the strictness with which the model melody is adhered to, the composition receives the name of Canon, i. e., rule, guide, norma, model; and a canon may be defined to be a composition on a given model. Of course, the model must be so formed as to admit of the harmony being grammatically correct.

34. In the well-known Grace, "*Non nobis, Domine,*" the model melody is as follows:—

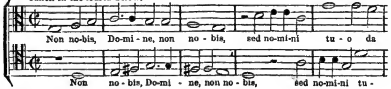

Non no - bis, Do-mi-ne, non no - bis, sed no-mi-ni tu - o da
glo - ri - am. Sed no - mi - ni tu - o da glor - ri - am.

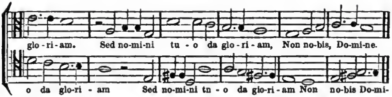
This model being imitated by the tenor, a fourth lower, after the expiration of half a measure, thus:—


Non no - bis Do - mi - ne, non no - bis, sed no - mi - ni tu -
o da glo - ri - am. Sed no - mi - ni tu - o da glo - ri - am.

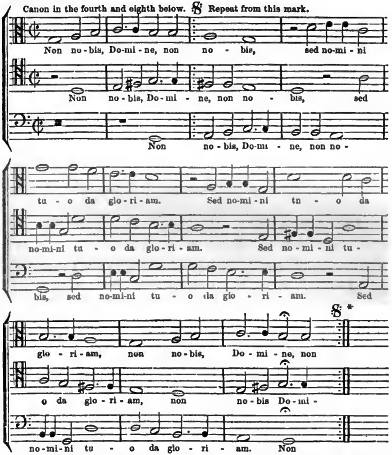
These two parts being put together form a mutual harmony.

Canon in the fourth below.


Non no-bis, Do-mi - ne, non no - bis, sed no-mi-ni tu - o da
Non no - bis, Do-mi - ne, non no - bis, sed no-mi-ni tu -


glo - ri - am. Sed no-mi-ni tu - o da glo - ri - am, Non no-bis, Do-mi-ne.
o da glo-ri - am Sed no-mi-ni tu - o da glo-ri-am Non no-bis Do-mi-

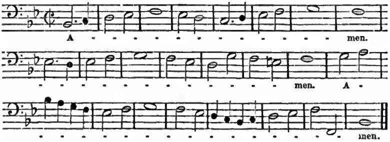
To which harmony, complete in itself so far as it goes, is added a third part, formed by the model subject in the bass, an octave below the model in the alto. The complete canon being as follows:—


Canon in the fourth and eighth below.
𝄋 Repeat from this mark.
Non no - bis, Do-mi - ne, non no - bis, sed no-mi - ni
Non no - bis, Do - mi - ne, non no - bis, sed
Non no - bis, Do-mi - ne, non no -
tu - o da glo - ri - am. Sed no-mi - ni tu - o da
no-mi-ni tu - o da glo - ri - am. Sed no - mi - ni tu -
bis, sed no-mi-ni tu - o da glo - ri - am. Sed
𝄋 *
glo - ri - am, non no - bis, Do - mi - ne, non
o da glo - ri - am, non no - bis Do - mi -
no - mi - ni tu - o da glo - ri - am. Non

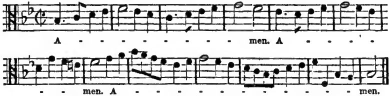
* Repeat at this mark in the third measure, and end on the notes with the mark 𝄐.

35. In the above specimen of canon writing, the notes in the responding parts not only follow one another by the same steps, but are also of exactly the same duration, as those of the model. But this strict uniformity with regard to time does not always take place, and the imitation may be written in notes of half, or quarter, &c., the duration of those of the model; and also in notes of double, quadruple, &c., thereof. The former kind is called a *canon by diminution* (of the duration of the notes of the model); the latter, a *canon by augmentation* (of the duration of the notes of the model). But in all cases, the melody of the model is strictly adhered to by all the imitating, or responding parts.

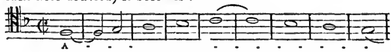
36. The following is a specimen of a canon, in which the tenor part proceeds by duple augmentation, and the alto by duple diminution. The subject for imitation is in the bass, as follows:—

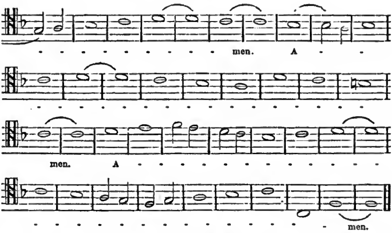

A . . . . men.
. . . . men. A .
. . . . men.

Which, diminished in duple proportion (i.e. in notes of half duration) by the alto part in the octave above, becomes:—


A . . . . men. A . . . . .
. . men. A . . . . men.

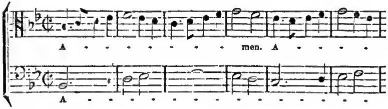
And when augmented in duple proportion (i.e. the duration of each note doubled) it becomes:—

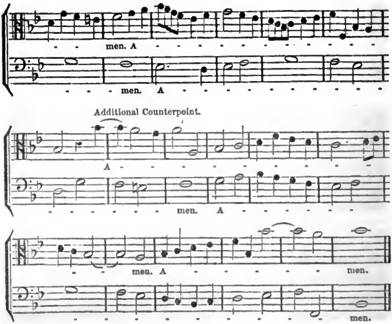




We see that there is only one half the number of measures required in the alto part, in consequence of the "diminution," or reduction of the duration to one half; and that twice the number of measures is necessary for the subject in the tenor part, in consequence of the duration being doubled (augmented in duple proportion).

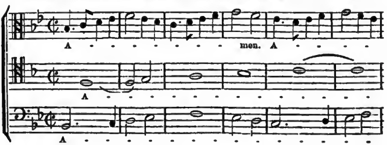
37. The composer of this noble canon has constructed it in the following manner; viz. the whole theme or subject for imitation is produced in the bass, and is the foundation of the entire harmony, and to it the alto part is applied, forming a counterpoint made entirely by the diminished theme (i. e. diminished in respect of the duration of the notes), *as far as the thirteenth measure*, in the first half of which the theme ends. Then, after a rest of the duration of a crotchet, the alto commences a new counterpoint as an accompaniment to the remainder of the theme.

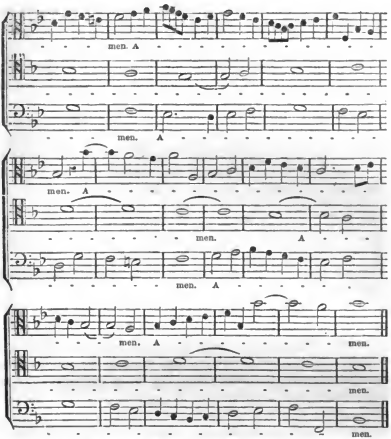




The tenor part, being added to this, fills up the harmony in three parts, and which is produced entirely by the imitation of the subject in the fifth above the bass; and hence the tenor part is written in the major scale, seated, or pitched, or F, while the bass and alto parts are written in the major scale seated on ♭B. The entire canon is constructed by these means as follows:—

Canon by diminution and augmentation, by Dr. Cooke.



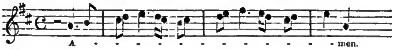


This canon is generally said to be in *twofold augmentation*, i. e. the subject, supposed to be in the alto part, is imitated in the bass by duple augmentation, and in the tenor by quadruple augmentation. But the subject is entire in the bass, and, as before remarked, the latter half of the subject is wanting in the tenor part, while in the alto there is an additional part from the latter half of the thirteenth measure.

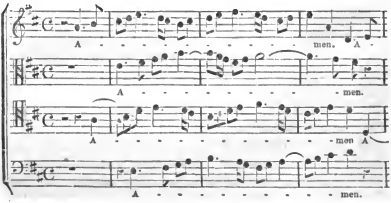
38. The old masters of the art of counterpoint were continually exercising their genius in writing canons, and some of the most extraordinary compositions were produced by them. But this kind of writing is for a long time gone out of fashion,

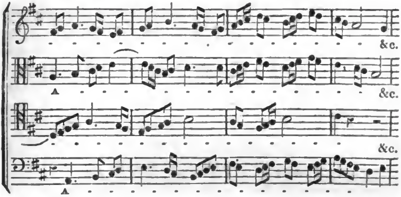
perhaps on account of the art having been pretty nearly exhausted by the ancients, as well as of the great ingenuity and labour required to produce a good canon. The finest specimens of canon writing have for a long time been produced by English composers, and the art is not yet wholly abandoned by them.

39. As a last example, and not to dwell too long on the subject in a treatise like this, the following specimen from Handel's sublime chorus at the end of his "Messiah," is here given, inasmuch as it shows the subject in an inverted order in some of the parts. The subject proposed for imitation is—

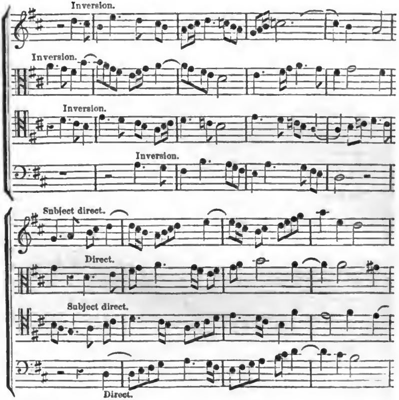


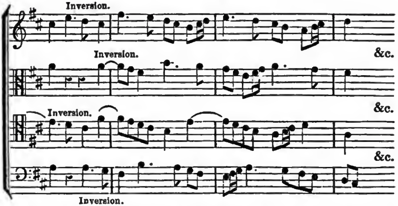
which is imitated by the tenor an octave lower, by the alto a fourth lower, and by the bass an octave below the alto. The treble leads the subject; at the second crotchet the tenor commences the imitation; at the third crotchet (i.e. at the commencement of the succeeding measure), the alto begins the imitation in the fourth below; and when it has proceeded a crotchet duration, the bass commences to do the same. Thus the parts are all a crotchet in advance of each other in the above order.


A - - - - - - - - - - - - - men. A -
A - - - - - - - - - - - men.
A - - - - - - - - - - - - men A
A - - - - - - - - - - - men.

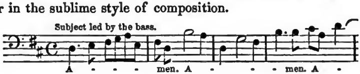


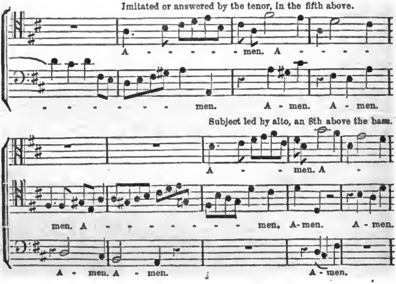
After an interlude, on the same subject, of several measures we find the subject imitated in an inverted order, with a slight alteration, thus:—

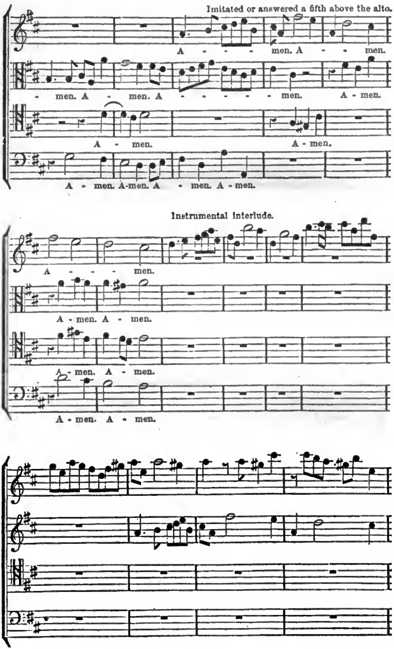




40. It is worth while to transcribe the whole of this sublime composition, as it will serve for an example for the student to endeavour to imitate, at the same time that it exhibits the wonderful resources of the science itself, as well as the grandeur of Handel's genius. No man has ever yet approached this great master in the sublime style of composition.

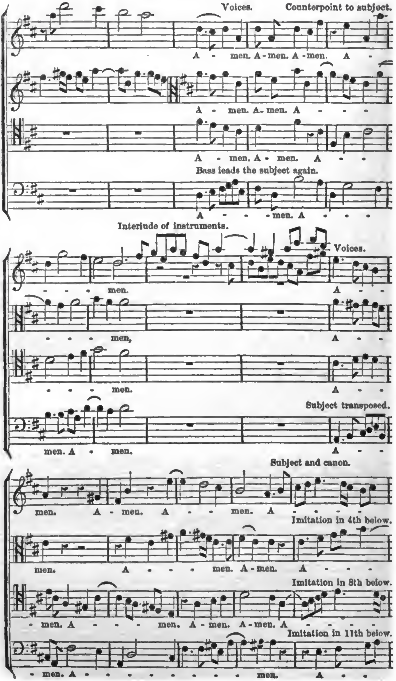


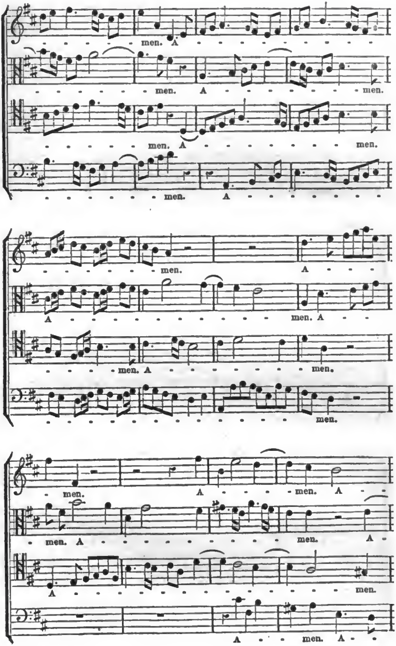

Imitated or answered by the tenor, in the fifth above.
A - - - - - - men. A - - - -
- - - - - - - men. A - men. A - men.
Subject led by alto, an 8th above the bass.
A - - men. A -
men. A - - - - - - - men. A-men. A - men.
A - men. A - men. A - men.

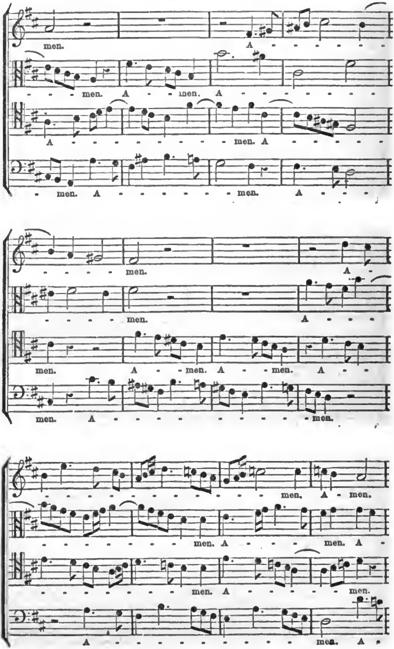


Imitated or answered a fifth above the alto.

Instrumental interlude.


Voices.
Counterpoint to subject.
A - men. A - men. A - men. A -
A - men. A - men. A - - - -
A - men. A - men. A - -
Bass leads the subject again.
A - - - men. A - - -
Interlude of instruments.
Voices.
- - - men. A - -
- - - men, A - -
- - - men. A - -
Subject transposed.
men. A - men. A - -
Subject and canon.
men. A - men. A - - men. A - - - - -
Imitation in 4th below.
men. A - - - men. A - men. A - - - -
Imitation in 8th below.
- men. A - - - men. A - men. A - men. A - - - - -
Imitation in 11th below.
- men. A - - - - - - - - men. A - -


men. A
men. A - men.
men. A - men.
men. A
men.
A
A - men. A
men. A - men.
men.
men.
A - men. A
men. A - men. A
A - men.
A - men. A



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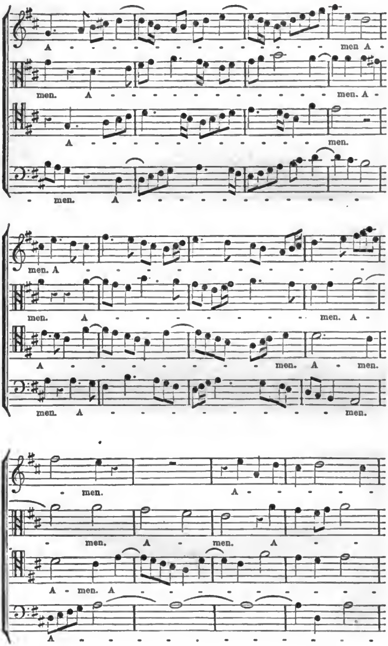
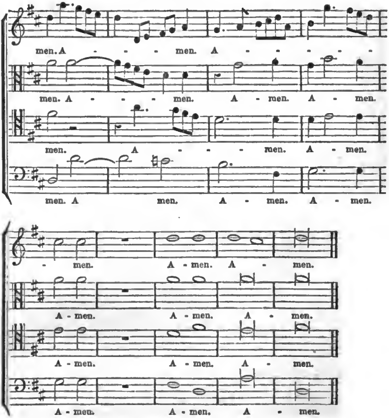

A - - - - - - - - - - - - - - - - - men A -
men. A - - - - - - - - - - - - - men. A -
A - - - - - - - - - - - - - - men.
- men. A - - - - - - - - - - - - - -
men. A - - - - - - - - - - - - -
men. A - - - - - - - - - - - men. A -
A - - - - - - - - - - men. A - men.
men. A - - - - - - - - - - - - men.
- men. A - - - - - -
- men. A - men. A - -
A - men. A - - - - - - - - - -
A - - - - - - - - - - - - -


men. A - - - men. A - - - - - -
men. A - - - - men. A - men. A - men.
men. A - - - men. A - men.
men. A men. A - men. A - men.
- men. A - men. A - men.
A - men. A - men. A - men.
A - men. A - men. A - men.
A - men. A - men. A - men.

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